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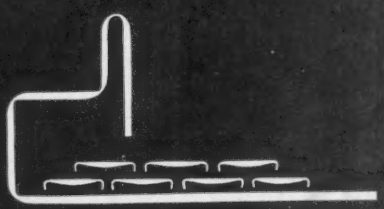
MOTION PICTURE HERALD

Better Theatres



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Market and Operating Data—1950

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ISSUED AS SECTION 2 OF MOTION PICTURE HERALD OF MARCH 25, 1950.

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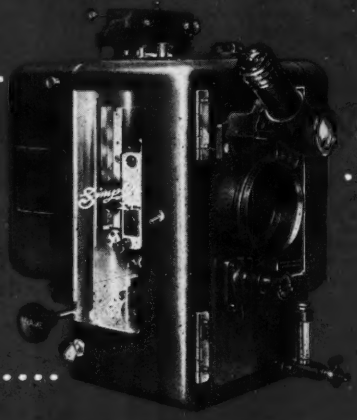
The Simplex X-L PROJECTOR

T. M. REG. U. S. PAT. OFF.

It's the Exhibitors' Ideal.....



It's the Projectionists' ...Dream

It's the Projector that Runs Like a Song.....

tra luminous *in Thrilling Brilliancy*

New Single-Unit built-in Conical Shutter transmits more light without travel ghost; shortens light-cutoff time!

New Futura Lens Mount handles fastest lenses of largest diameters; prepares now for the future!

tra lucid *in Hairline Definition*

New Micrematic Screenscope gives projectionist an 8-power close-up; guarantees swift, precise focusing!

New Shutter Positioning cuts lightbeam at narrowest point; maintains sharpest definition!

You will SAVE the difference

tra audable *in Unfailing Steadiness*

New Film Gate and Trap Assembly assures equalized tension on both film edges; overcomes shoe chatter; gives precision efficiency regardless of varying film thickness!

New Self-Lubricating Intermittent Movement gives quieter operation; reduces maintenance costs.

Patrons will SEE the difference

tra asting *in Dependable Operation*

New Spray-O-Matic Lubrication in sealed compartment bathes every driving surface in gentle waterfall of filtered oil; stops oil splash, splatter and seepage; cuts frictional wear to vanishing point.

New Design Simplification reduces starting load 80%, eliminates gear-stripping; cuts running load 66⅔%, achieves smoother-running mechanism.

Projectionists will ENJOY the difference

tra ucrative because it gives you the sharpest, steadiest picture ever projected . . . the quietest, easiest-operating mechanism you've ever imagined . . . and more dollar return for every dollar spent.

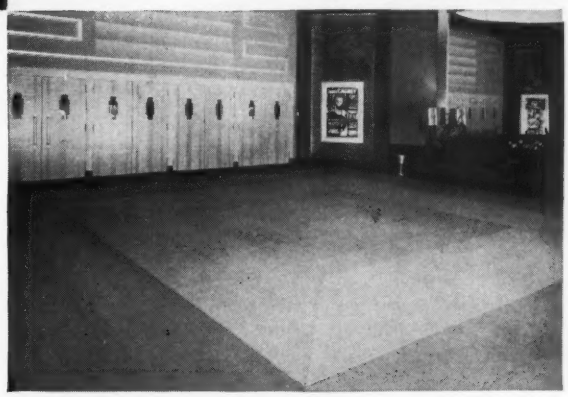
because the new Simplex gives you years-ahead features...NOW!

MANUFACTURED BY INTERNATIONAL PROJECTOR CORP., BLOOMFIELD, N. J.
DISTRIBUTED BY NATIONAL THEATRE SUPPLY

UMI

Beechwood Theatre, Columbus, Ohio

Lake Theatre, Cleveland, Ohio



Customers flock to the theatre that puts on the best show . . . on the screen and in the lobby.

Business is on the carpet and carpet is our business

That's why it's good business to choose your theatre's carpet with as much care as you choose your film attractions. Get in touch with your local Alexander Smith-Masland theatre carpet contractor. Let him show you what is new in carpet weaves, colors, patterns, and qualities. Let him suggest the carpet that will do most for your lobby, at the least cost to you. Let him estimate the cost of re-carpeting your aisles, lounges, and powder rooms, too. His knowledge and experience will save you time and money.

Why not phone the Alexander Smith-Masland contractor in your city, today? Or write Alexander Smith-Masland Contract Department, 295 Fifth Avenue, New York 16, N. Y.

Oriental Theatre, Chicago, Illinois

Alexander Smith
and
C. H. Masland

CONTRACT CARPETS

295 Fifth Avenue, New York 16, New York

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Motiograph Model "AA" Double Shutter Projectors are designed and built to operate longer without costly repairs and replacements and consequently have the lowest possible ultimate cost. They assure maximum screen illumination without flicker. Smooth, quiet, cool operation. Buy Motiograph; buy proven satisfaction.

Order from your Motiograph dealer or write

MOTIOGRAPH, INC.
4431 W. Lake St., Chicago 24, Ill.
Export Division (Except Canada)
Frazar & Hansen, Ltd., 301 Clay St.
San Francisco 11, California

GUIDE number

A classified digest of articles of lasting value in BETTER THEATRES from March 1949 through February 1950 . . . and of purchasing data on 1950 lines of theatre equipment, materials and supplies . . . incorporating also an issue of THEATRE SALES of similar service.

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The new American Bodiform Retractor

COMFORT that brings patrons in again and again! Seats swing back effortlessly to let others pass. Empty seats automatically assume ¾ safety-fold position. All moving parts shielded—no hazards, no soiling. Amazingly low housekeeping and maintenance.

American Bodiform Retractor No. 20-001 with 128 end

American Bodiform Retractor retracted position

American Seating Company

WORLD'S LEADER IN PUBLIC SEATING

Grand Rapids 2, Michigan • Branch Offices and Distributors in Principal Cities
Manufacturers of Theatre, Church, School, Auditorium, Transportation, Stadium Seating, and Folding Chairs

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THEATRE SUPPLY DEALERS IN THE UNITED STATES

Unaffiliated and RCA dealers are numbered, with RCA dealers distinguished by an asterisk. National Theatre Supply (NTS) branches are geographically listed.

ALABAMA
1—Queen Feature Service, 2009½ Morris Ave., Birmingham.

ARKANSAS
2—Theatre Supply Co., 1021 Grand Ave., Fort Smith.

ARIZONA
3—Girard Theatre Supply, 320 W. Washington St., Phoenix.

CALIFORNIA
Los Angeles:
4—Brack Photoplay Supply, Inc., 1969 S. Vermont Ave.
5—John P. Filbert, 2007 S. Vermont Ave.*
National Theatre Supply, 1961 S. Vermont Ave.
6—Projection Equipment & Maintenance, 1975 S. Vermont Ave.
7—B. F. Shearer, 1964 S. Vermont Ave.

San Diego:
8—Riddles Theatre Supply, 1543 Fifth Ave.

Fresno:
9—Midstate Theatre Supply, 1906 Thomas.

San Francisco:
National Theatre Supply, 255 Golden Gate Ave.
10—Pradday Theatre Supplies, 187 Golden Gate Ave.
11—B. F. Shearer, 243 Golden Gate Ave.
12—Western Theatrical Equipment, 337 Golden Gate Ave.*

COLORADO
Denver:
13—Graham Brothers, 548 Lincoln St.
National Theatre Supply, 2111 Champa St.
14—Service Theatre Cupply, 2054 Broadway.
15—Western Service & Supply, 2120 Broadway.*

CONNECTICUT
New Haven:
16—Phillips Theatre Supplies, 130 Meadow St.
National Theatre Supply, 122 Meadow St.

DISTRICT OF COLUMBIA (Washington)
17—Brient & Sons, 802 Capitol St.*
18—Ben Lust, 1001 New Jersey Ave., N.W.

FLORIDA
19—Joe Hornstein, 714 N. E. 1st St., Miami.
20—Southeastern Equipment, 625 W. Bay St., Jacksonville.*
21—United Theatre Supply, 110 Franklin St., Tampa.

GEORGIA
Albany:
22—Dixie Theatre Service & Supply, 1014 National Slappery Dr.

Atlanta:
23—Capitol City Supply, 161 Walton St., N. W.
National Theatre Supply, 187 Walton St., N. W.
24—Southeastern Theatre Equipment, 201-3 Luckie St., N. W.*
25—Wil-Kin Theatre Supply, 150-4 Walton St., N. W.

ILLINOIS
Chicago:
26—Abbott Theatre Supply, 1311 S. Wabash Ave.*
27—Droll Theatre Supply, 925 W. Jackson Blvd.
28—Gardner Theatre Equipment, 1235 Wabash Ave.
29—Midwest Theatre Service & Equipment, 1950 W. Belmont Ave.
30—Movie Supply, 1318 S. Wabash Ave.
National Theatre Supply, 1325 S. Wabash Ave.

INDIANA
Evansville:
31—Evansville Theatre Supply, 1738 E. Delaware St.

Indianapolis:
32—Gar-Bar, Inc., 424 N. Illinois St.
33—Mid-West Theatre Supply Company, 448 N. Illinois St.
National Theatre Supply, 436 N. Illinois St.

IOWA
Des Moines:
34—Des Moines Theatre Supply, 1121 High St.
National Theatre Supply, 1102 High St.

KANSAS
35—Southwest Theatre Equipment, P. O. Box 2138, Wichita.

KENTUCKY
Louisville:
36—Falls City Theatre Equipment, 427 S. Third St.
37—Hadden Theatre Supply, 209 S. Third St.

LOUISIANA
New Orleans:
38—Delta Theatre Supply, 214 S. Liberty St.*
39—Hodges Theatre Supply, 150 S. Liberty St.
National Theatre Supply, 220 S. Liberty St.

Shreveport:
40—Alon Boyd Theatre Equipment, Cedargrove Station.

MARYLAND
Baltimore:
41—Dusman Motion Picture Supplies, 2021 N. Charles St.
National Theatre Supply, 417 St. Paul Place.

MASSACHUSETTS
Boston:
42—Capitol Theatre Supply, 28 Piedmont St.*
43—Joe Cifre, 44 Winchester St.
44—Independent Theatre Supply, 28 Winchester St.
45—Massachusetts Theatre Equipment, 20 Piedmont St.
National Theatre Supply, 37 Winchester St.
46—Standard Theatre Supply, 78 Broadway.
47—Theatre Service & Supply, 30 Piedmont St.

MICHIGAN
Detroit:
48—Amusement Supply, 208 W. Montcalm St.
49—Ernie Forbes Theatre Supply, 214 W. Montcalm St.*
50—McArthur Theatre Equipment, 454 W. Columbia St.
National Theatre Supply, 2312-14 Cass Ave.
51—United Theatre Equipment, 2501 Cass Ave.

Grand Rapids:
52 Ringold Theatre Equipment, 106 Michigan St., N. F.

MINNESOTA
Minneapolis:
53—Minneapolis Theatre Supply, 75 Glenwood Ave.
54—Elliott Theatre Equipment, 1110 Nicollet Ave.
55—Frosch Theatre Supply, 1111 Currie Ave.*
National Theatre Supply, 56 Glenwood Ave.
56—Western Theatre Equipment, 45 Glenwood Ave.

MISSOURI
Kansas City:
57—Missouri Theatre Supply, 115 W. 18th St.*
National Theatre Supply, 223 W. 18th St.
58—Shreve Theatre Supply, 217 W. 18th St.
59—Stebbins Theatre Equipment, 1804 Wyandotte St.

St. Louis:
60—Hornstein, Joe, 3146 Olive St.
National Theatre Supply, 3212 Olive St.
61—St. Louis Supply Co., 3310 Olive St.*

MONTANA
62—Montana Theatre Supply, Missoula.

NEBRASKA
Omaha:
63—Ballantyne Co., 1707 Davenport St.
National Theatre Supply, 1610 Davenport St.
64—Quality Theatre Supply, 1515 Davenport St.
65—Western Theatre Supply, 214 N. 15th St.*

NEW MEXICO
66—Eastern New Mexico Theatre Supply, Box 1099, Clovis.

NEW YORK
Albany:
67—Albany Theatre Supply, 1046 Broadway.
68—Empire Theatre Supply, 1003 Broadway.
National Theatre Supply, 902 Broadway.

Auburn:
69—Auburn Theatre Equipment, 5 Court St.

Buffalo:
70—Eastern Theatre Supply, 496 Pearl St.*
National Theatre Supply, 498-500 Pearl St.
71—United Projector & Film, 228 Franklin St.

New York City:
72—Amusement Supply, 341 W. 44th St.
73—Capitol Motion Picture Supply, 630 Ninth Ave.*
74—Crown Motion Picture Supplies, 364 W. 44th St.
75—Joe Hornstein, 630 Ninth Ave.
National Theatre Supply, 356 W. 44th St.
76—S. O. S. Cinema Supply, 602 W 52nd St.
77—Star Cinema Supply, 441 W. 50th St.

Syracuse:
78—Central N. Y. Theatre Supply, 210 N. Salina St.

NORTH CAROLINA
Charlotte:
79—Bryant Theatre Supply, 227 S. Church St.
80—Dixie Theatre Supply, Box 217.
National Theatre Supply, 304 S. Church St.
81—Southeastern Theatre Equipment, 209 S. Poplar St.*
82—Standard Theatre Supply, 222 S. Church St.
83—Theatre Equipment Co., 220 S. Poplar St.
84—Wil-Kin Theatre Supply, 229 S. Church St.

Greensboro:
85—Standard Theatre Supply, 215 E. Washington St.
86—Theatre Equipment Co., 111 Edwards Pl.

NORTH DAKOTA
87—McCarthy Theatre Supply, 55 Fifth St., Fargo.

OHIO
Akron:
88—Akron Theatre Supply, 1025 N. Main St.

Cincinnati:
89—Cincinnati Theatre Supply, 1716 Logan St.
90—Mid-West Theatre Supply, 1638 Central Pkway.*
National Theatre Supply, 1637-39 Central Pkway.

Cleveland:
91—Cleveland Projector Co., 1723 E. 86th St.
National Theatre Supply, 2128 Payne Ave.
92—Ohio Theatre Equipment, 2100 Payne Ave.
93—Oliver Theatre Supply, 2108 S. Payne.*
94—Oklahoma Theatre Supply, E. 23rd & Payne.

Columbus:
95—American Theatre Equipment, 165 N. High St.

Dayton:
96—Dayton Film, 2227 Hepburn Ave.
97—Dayton Theatre Supply, 111 Volkenand St.
98—Sheldon Theatre Supply, 1420 Canfield Ave.

Toledo:
99—American Trade Supply, 519 E. Broadway.
100—General Theatre Equipment, 109 Michigan St.
101—Theatre Equipment Co., 109 Michigan St.

OKLAHOMA
Oklahoma City:
102—Howell Theatre Supplies, 12 S. Walker Ave.
National Theatre Supply, 700 W. Grand Ave.
103—Oklahoma Theatre Supply, 628 W. Grand Ave.*

OREGON
Portland:
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105—Theatre Utilities Service, 1935 N. W. Kearney St.
106—Western Theatre Equipment, 1923 N. W. Kearney St.

PENNSYLVANIA
Philadelphia:
107—Blumberg Bros., 1305-07 Vine St.*
National Theatre Supply Co., 1225 Vine St.
108—Penn Theatre Equipment, 307 N. 13th St.

Pittsburgh:
109—Alexander Theatre Supply, 1705 Blvd. of Allies.*
110—Atlas Theatre Supply, 425 Van Braam St.
National Theatre Supply, 1721 Blvd. of Allies.
111—Superior Motion Picture Supply, 84 Van Braam St.

Wilkes Barre:
112—Vincent M. Tate, 1620 Wyoming Ave., Forty-Fort.

RHODE ISLAND
113—Rhode Island Supply, 357 Westminster St., Providence.

SOUTH DAKOTA
114—American Theatre Supply, 316 S. Main St., Sioux Falls.

TENNESSEE
Memphis:
115—Monarch Theatre Supply, 492 S. Second St.*
National Theatre Supply, 412 S. Second St.
116—Tri-State Theatre Service, 318 S. Second St.

TEXAS
Dallas:
117—Hardin Theatre Supply, 714 Hampton Rd.
118—Herber Bros., 408 S. Harwood St.
119—Modern Theatre Equipment, 214 S. St. Paul St.
National Theatre Supply, 300 S. Harwood St.
120—Southwestern Theatre Equipment, 2010 Jackson St.*

Houston:
121—Southwestern Theatre Equipment, 1416 Main St.*

UTAH
Salt Lake City:
122—Intermountain Theatre Supply, 142 E. First St.
123—Service Theatre Supply, 256 E. First St.
124—Western Sound & Equipment, 142 E. First South St.*

VIRGINIA
125—North Theatre Supply, 2706 Cooley Ave., Norfolk.

WASHINGTON
Seattle:
126—American Theatre Supply, 1504 14th Ave., E. South Pike.
127—Modern Theatre Supply, 2400 Third Ave.*
National Theatre Supply, 2319 S. Second St.
128—B. F. Shearer, 2318 Second Ave.
129—Western Theatre Equipment, 2224 Second Ave.

WEST VIRGINIA
130—Charleston Theatre Supply, 506 Lee St., Charleston.

WISCONSIN
Milwaukee:
131—Manhardt Co., 1705 W. Clybourn St.*
National Theatre Supply, 1027 N. Eighth St.
132—Ray Smith, 710 W. State St.
133—Theatre Equipment & Supply, 1009 N. Seventh St.

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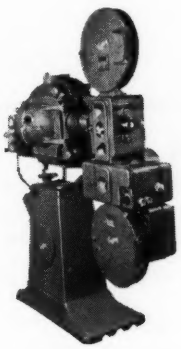
FOR THEATRES OUTSIDE U.S.A. AND CANADA . . .

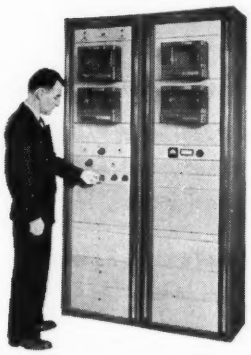
Westrex Theatre Sound Systems

SOUND AND PROJECTION SYSTEMS



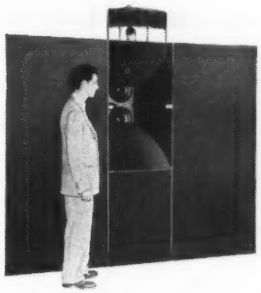
Westrex Master, Advanced and Standard Sound Systems, all using Western Electric Hydro Flutter Suppressors in their sound heads, meet the requirements of every theatre, large or small.

AMPLIFYING EQUIPMENT



For maximum flexibility, Westrex amplifiers are available in power ranges from 15 to 100 watts. All give clear undistorted reproduction even when operated at full capacity.

LOUDSPEAKER SYSTEMS



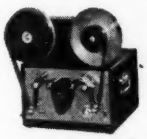
Westrex backstage systems for theatres and studio review rooms of every size use the world-famous Western Electric loudspeakers. These systems range from single unit systems to large multiple unit installations.

Westrex also offers a complete line of projection equipment, theatre supplies and accessories.

. . . FOR STUDIOS EVERYWHERE

Western Electric Recording Equipment

RECORDING



WESTREX PORTABLE MAGNETIC RECORDER

RA 1231 RECORDER WITH AUTOMATIC RECORDER CONTROL

Westrex now offers to studios complete equipment for photographic, magnetic and disk recording.

With the new Westrex magnetic recording system, all original recording is done magnetically, making immediate playback possible. Magnetic film, used for editing and cutting, can be erased and re-used.

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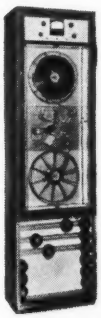
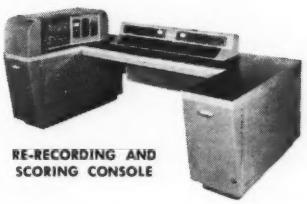


WESTERN ELECTRIC RE-RECORDER

A complete line of Westrex and Western Electric re-recorders provides facilities for 16 and 35 mm, 100 mil standard, 100 mil and 200 mil push-pull photographic recordings, and for magnetic recordings.



RE-RECORDING AND SCORING CONSOLE

Re-recording and scoring consoles are offered in standard sizes and types as well as in special designs for the requirements of individual studios.

Research, Distribution and Service for the Motion Picture Industry

Westrex Corporation

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HOLLYWOOD DIVISION: 6601 ROMAINE STREET, HOLLYWOOD 38, CAL.

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BETTER THEATRES-THEATRE SALES MARKET & OPERATING GUIDE

INDEX OF ADVERTISERS by Products

BETTER THEATRES GUIDE NUMBER for 1950 (Section 2, Motion Picture Herald, March 25, 1950.)

ALPHABETICAL ADVERTISERS' INDEX ON PAGES 77-78

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Typhoon Air Conditioning Co., Inc.

Amplifiers
Ballantyne Co., The
Wenzel Projector Co.

Architectural Design
F & J Building Service, The

Auditorium Chairs
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National Carbon Co., Inc.

Carbon Savers & Processing
Cali Products Co.
Droll Theatre Supply Co.

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Curtain Tracks & Control Equipment
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Vallen, Inc.

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S. O. S. Cinema Supply Corp.
Robin, Inc., J. E.
Westrex Corp.

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Wagner Sign Service, Inc.

Drive-In Concession Service
Sportservice, Inc.

Drive-In Concession Tables & Stools
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Drive-In Construction
Ballantyne Co., The

Drive-In Insecticide Fogging Equipment
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Drive-In Playground Equipment
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Emergency Light & Power
Onan & Sons, Inc., D. W.

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American Mat Corp.
Masland Sons, C. H.
Smith & Sons Co., Alexander

Front Materials
Poblocki & Sons

Hand Driers
Chicago Hardware Foundry Co.

INQUIRY SERVICE INSERT

For those who wish to use Quigley Publications' Service Department to request further information concerning products, postcards are supplied on pages 77-78, adjoining an alphabetical list of advertisers in this issue. Several self addressed business reply postcards are supplied for use from time to time according to the index reference number system.

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Telesonic Theatrephone Co.

Ice Cream Machines
Bert, Samuel

In-Car Speakers
Ballantyne Co., The
DeVry Corp.
Drive-In Theatre Equipment Co., Inc.
General Electric Co., Electronics Dept.
International Projector Corp.

In-Car Maintenance
RCA Service Co.

Interior Decoration & Materials
Knoxville Scenic Studios
Novelty Scenic Studios, Inc.

Lighting
Kliegl Bros.

Magazines
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Wenzel Projector Co.

Marquees & Signs
Poblocki & Sons

Mats, Lobby
American Mat Corp.

Motor-Generators
Ballantyne Co., The
Imperial Electric Co., The

Popcorn Boxes
Droll Theatre Supply Co.

Popcorn Machines
Cretors & Co., C.
Manley, Inc.
National Theatre Supply

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Ashcraft Mfg. Co., C. S.
Ballantyne Co., The
Strong Electric Corp.

Projection Lenses
Kollmorgen Optical Corp.

Projector Parts
LaVezzi Machine Works

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DeVry Corp.
International Projector Corp.
Motiograph, Inc.
Wenzel Projector Corp.

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Garver Electric Co.
Robin, Inc., J. E.
Strong Electric Corp.

Reels
Goldberg Bros.

Reflectors
Heyer-Shultz, Inc.
Strong Electric Corp.

Rewinders
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Refreshment Car
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Theatre Managers Institute

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Nu-Screen Corp.
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Splicers, Film
Griswold Machine Work

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Chicopee Mfg. Corp. of Ga., Lumite Div.
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Breuer Electric Mfg. Co.
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National Super Service Co., Inc.
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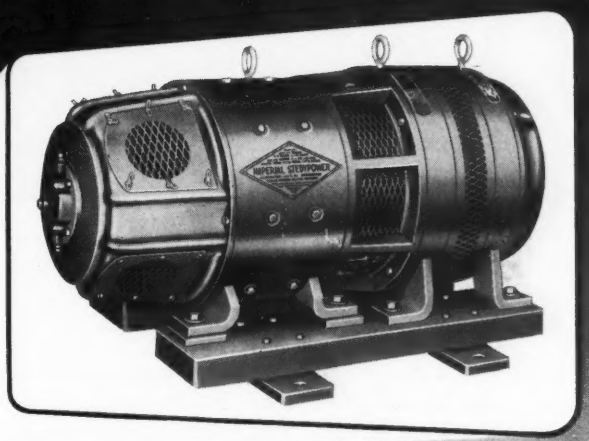
For DEPENDABLE PROJECTION USE IMPERIAL STEDYPOWER



POWER FAILURES COST YOU MONEY and PATRONS

A Motor Generator Set with "Built in Electrical and Motion Picture Experience" to Meet Today's Exacting Requirements.

•

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Imperial — Quality Service Right Prices Courteous Treatment

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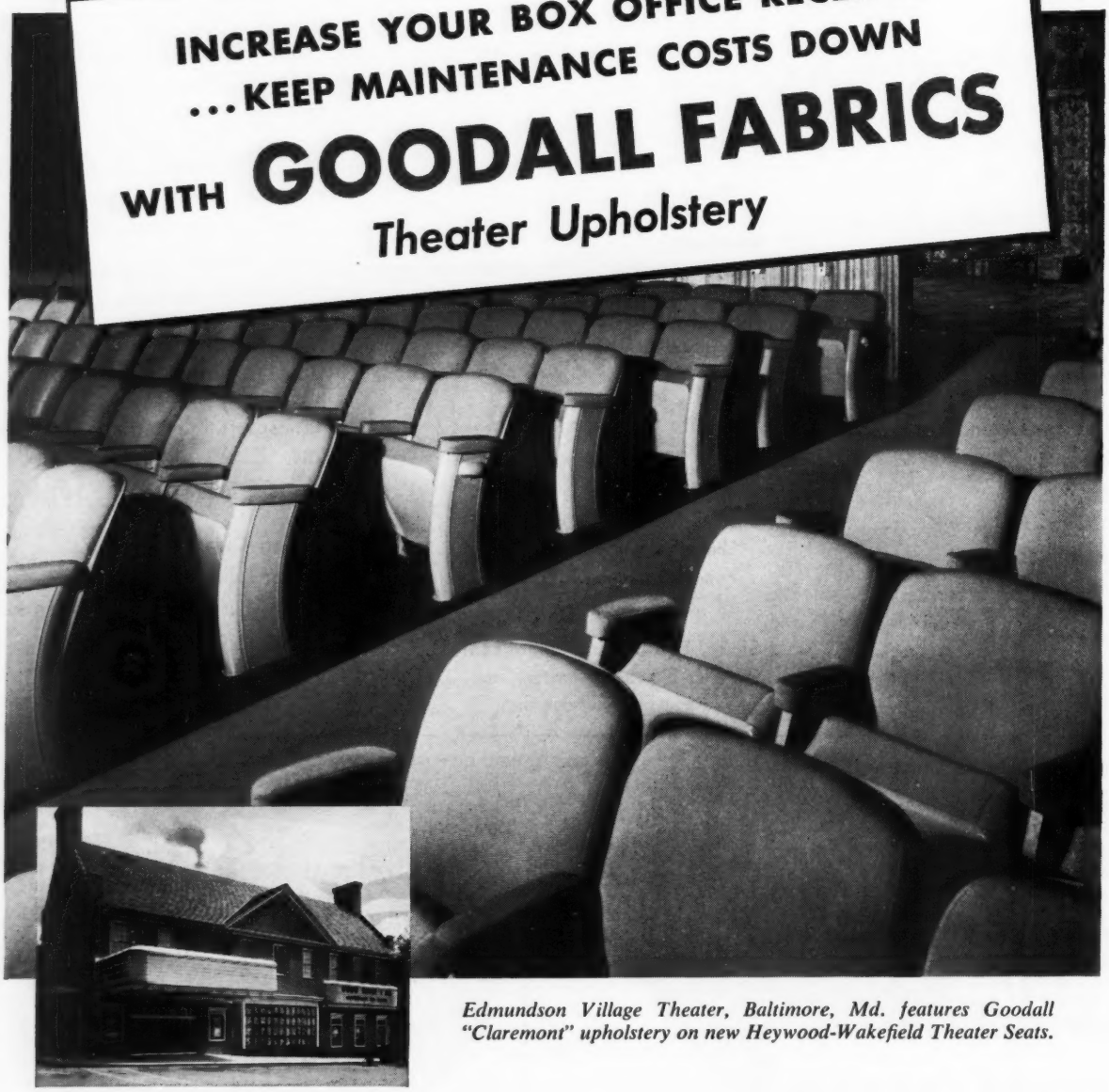

Edmundson Village Theater, Baltimore, Md. features Goodall "Claremont" upholstery on new Heywood-Wakefield Theater Seats.

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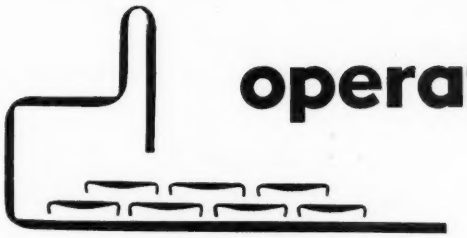


operating data

Architectural Design, Construction and Interior Decoration

Basic Considerations in Auditorium Modernization

A MAJOR ITEM in modernizing existing motion picture theatres, is the treatment of the interior surfaces of the auditorium. While it is basic to require a new interior face just for the purpose of achieving a "new look," it is equally important to create an interior surface treatment which will behave functionally to enhance the effectiveness of the screen presentation. It is entirely possible to achieve both of these results.

Auditorium finishes generally come under three headings—plaster, prefabricated wall boards or tiles, and draped or stretched fabrics.

Under the first two headings there is the further subdivision of the materials, as to whether they are applied directly on to the structural enclosure, or applied with an air space between the finish and structural core.

Air space is provided as insulation and a safeguard against condensation appearing on the surface of the interior finish. The air space also is a favorable factor acoustically.

This air space varies from as little as one inch to many feet in depth. The minimum is used where only the insulation and condensation factors are considered; the greater dimensions are used to make the interior shape of the auditorium different from the structural shell (often an unnecessarily wasteful form of construction).

This interior shaping is usually referred to as *furring* and is a light type of non-supporting construction; it has only to support its own weight. When cost must be at a minimum, this latter type of construction is kept to a minimum, thereby leaving the expression of the structural shell more visible in the interior.

There are many existing theatres where the basic structural shell—or even the form of an interior furred shape—needs modification to conform to good standards.

FACTORS OF SHAPE

There are two factors which determine correct interior shaping. 1 *The acoustical factor,* wherein the interior shaping is designed to direct and diffuse the sound. 2 *Lighting* of interior surfaces in accordance with the manner in which the light coming from the projected picture will fall on the surfaces that come into the patron's field of vision at the screen end of the auditorium. *The interior shaping at the screen end should be shadowless, devoid of light and dark shadings that create alternate patches of contrast in illumination.* Beam protusions, or panel effects in the ceiling, will show shadows with the screen reflections as the source of light. Likewise on the walls, pilasters will create shadows.

Abrupt shadows are more undesirable than shadings of light caused by surfaces that, in parts, turn away from screen light; however, even these more subtle shadowings should be avoided, if possible, since *the ideal condition is one in which the entire wall and ceiling area reflects the screen light in as uniform a manner as possible.*

Objectionably contrasting surfaces are not caused merely by physical breaks and bendings of surfaces; they are also caused by contrasting decorations achieved with paint or variations in surface texture.

DECORATION IN ITS PLACE

Exclusion of contrasting surfaces still allows for creation of an inviting atmosphere. A pleasing decorative mood for the whole theatre is best achieved through decoration in portions where it does not intrude upon the projected picture.

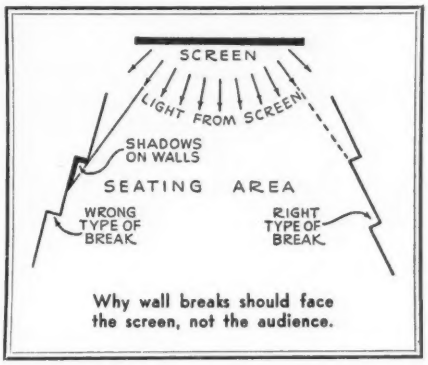
This leaves a fairly large area of interior surface in the auditorium whereon appropriate decorations can be used. These are the surfaces on the side walls and ceiling farthest from the screen, and the rear wall.

To determine which of the auditorium surfaces may be treated with optional decoration and which shall receive the neutral treatment, project a 60° angle of vision from the position of the patron seated farthest from the picture. All of the surfaces seen within this angle are the only surfaces where the neutral type of treatment would be mandatory.

The human field of vision is actually 180°, but it is only within 60° in the center of the field that the eye is able to discern details; so for practical purposes, the 60° triangle can be used to locate decorative areas.

AUDITORIUM MATERIALS

New plaster work, or alterations in plaster, is the most costly type of interior finish when new shaping of surfaces has to be created. Also, the wet process of plastering will close down theatre operations for a more serious period than if dry construction methods are used. *Plastering, however, does provide the most flexible medium of creating continuity of surface and control of texture.*



Why wall breaks should face the screen, not the audience.

The use of prefabricated boards, sheets or tiles may also be carried out successfully, and yet maintain a shadowless flow of line by effecting change in the direction of the "flow" of the surfaces, modifying the angles

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to minimize contrasts in light reflection from the screen. Also actual breaks in surface can be used *if the break surfaces are made to face the screen* and not the audience (see diagram).

To keep costs to a minimum it may be possible to limit basic changes in the auditorium to the screen end which requires functional form. Elsewhere paint may do.

An important step in improving the auditorium treatment is to remove all forms of lighting fixtures from the walls and ceiling, especially in the areas that should have a neutral, functional character.

Concealed light sources have been found to be the most successful type of lighting for a motion picture auditorium.

Indirect cove lighting is indicated primarily for intermission lighting.

Where they do not enter into vision of the picture, exposed lighting fixtures may serve visibility and contribute decoration and thus supply a modernizing effect.

—Ben Schlanger.

Getting Selling Value in Coming Attraction Displays

COMING ATTRACTION displays should be placed where they are most *apt* to be seen, which means most *easy* to be seen.

The size of a display, and the size of the lettering and art work in the display should be determined by the distance from the display that the viewers are most likely to be. Displays that are too large for close viewing are just as ineffective as those that are too small for the larger viewing distances.

These latter considerations are especially important for the displays inside the theatre where the space and viewing conditions can vary so much.

The coming attraction message should be spelled out to the patron immediately after he has purchased his ticket, and short of annoying him, that message should be repeated at as many points in the theatre as possible. Since most patrons of the non-transient type of theatre know what the attraction is *before* they even reach the theatre, it becomes obvious that the coming attraction displays are ones to receive maximum attention.

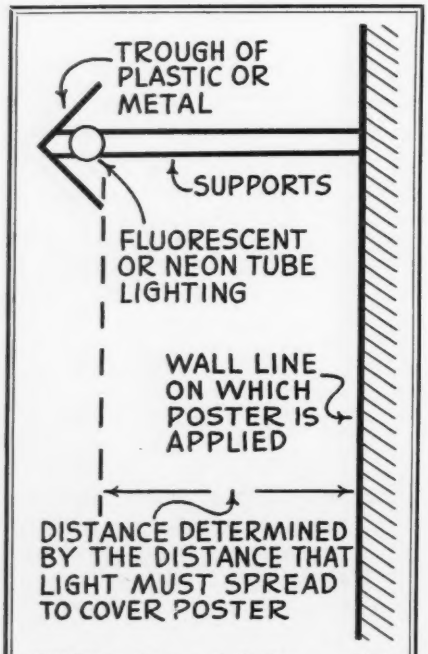

TROUGH OF PLASTIC OR METAL
SUPPORTS
FLUORESCENT OR NEON TUBE LIGHTING
WALL LINE ON WHICH POSTER IS APPLIED
DISTANCE DETERMINED BY THE DISTANCE THAT LIGHT MUST SPREAD TO COVER POSTER

FIGURE A—Diagram indicating a method for lighting posters and immediate interior area where it is located by the same sources.

While some distributor accessories posters may be used as a whole, or be cut up and adapted for some of the art work in them, the best display has distinction by virtue of some amount of special art work to make the attraction best fit the particular theatre as to both policy and physical space conditions of the theatre.

The spotting of coming attraction displays should be determined only after careful consideration as to which locations will be seen most by patrons. The location, if any, where a patron is apt to linger awhile is most desirable. A good location for the display is not enough to get the message across, however; it is also neccessary to use some device to attract and hold the attention of the patron for the short while necessary for an impression.

COMPELLING ATTENTION

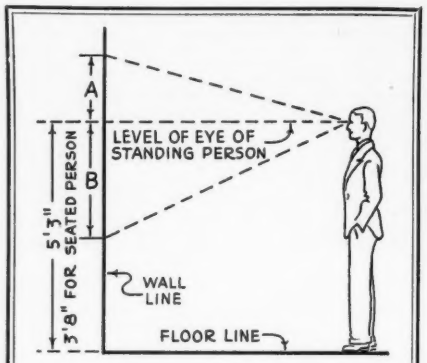
Such a device may be in the form of a lighting effect, the use of a large frame around a comparatively small display, a deeply recessed or prominently projected frame, or some other design effect that ingenuity can create.

While sheer size can be the way to attract attention, this device has lost some of its effect mostly because it has been overplayed. Moreover, it is not warranted when the potential viewing distance is much too small to allow an effective view of the whole display. Small displays of effective design can be just as powerful.

Small displays have the advantage of being unobtrusive, while they can be given novelty and smart placement value. Whenever possible these displays should be given as much depth as possible to allow for a three-dimensional treatment. This treatment can be effected with cutout lettering, miniature facsimiles of objects, many of which are available at a dime store; or scenic backgrounds where sufficient depth of display is available.

SPACE-DISPLAY LIGHTING

Sometimes the poster and space lighting can be effected by the same sources. This can be done by placing a light cove on one or more sides, or even all around the display which will throw light to the surfaces *beyond the display* as well as on it.



How to determine good position and dimensions on a wall surface for actual poster area. Distance A is 3 inches when the viewer is one foot from the wall, and it increases 3 inches for each additional foot that the viewer is away from the wall. Distance B is 6 inches when the viewer is one foot away from the poster, and the increase is 6 inches for each additional foot. Distance A-B is the available height for the displays. The distance from the floor to the bottom of the display for a standing viewer is always 5 feet, 3 inches minus the amount of Distance B. Distances A and B are calculated different for a seated patron. Where the view of seated patrons are emphasized, the increase of Distance A becomes 6 inches for every foot of additional viewing distance, and Distance B is 3 inches for each additional foot (these are the reverse of the calculations for standing viewers). Conditions should be created in the arrangement of furnishings and other components of the interior to place patrons in such relations to the advertising as to make seeing it natural, comfortable—and unavoidable.

This is most effectively done by supporting the lighting trough on pegs or pipe stems attached to the wall. These supports because of their minimum diameter and because they are always behind the trough, are sufficiently concealed to make the trough have a floating effect on the wall. These light troughs need not and should not, be placed too close to the actual poster.

Greater flexibility in design effects can be achieved if the distance of light source from the poster can vary, and if the shape of the trough frame or strips is left to the imagination of the designer.

—Ben Schlanger.

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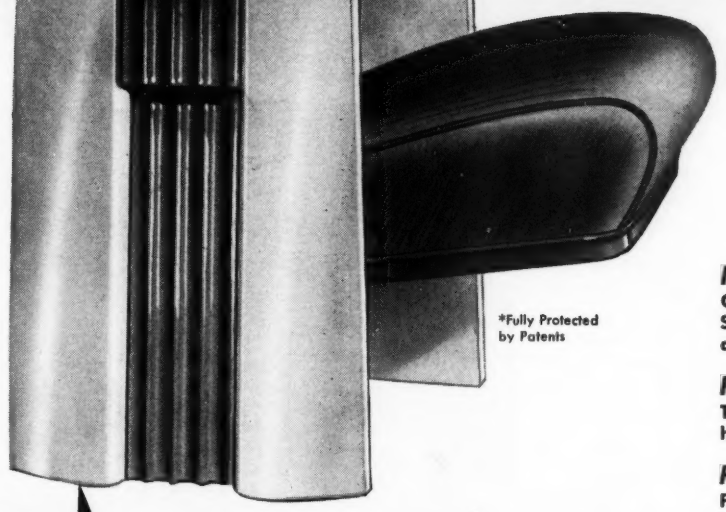
Only KROEHLER *Push-Back** Seats Give you 12 Years of PROOF-in-USE!



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Leading theatre managers agree that only Kroehler Push-Back—with its 12-year history of proof-in-use—gives the four success qualities a theatre needs:

PROVED ADVERTISING FEATURES
Outstanding advantages of Push-Back Seats create valuable word-of-mouth advertising.

PROVED COMFORT AND CONVENIENCE
Thousands of comfort-conscious patrons heartily approve Kroehler Push-Back.

PROVED BOX OFFICE APPEAL
Push-Backs are real showmanship—permanent salesmen that pay off at your box office.

PROVED QUALITY AND DURABILITY
Day in, day out, in hundreds of theatres, Push-Backs have proved sturdy, efficient, durable.

The Only Theatre Seat that Combines Push-Back Conveniences with Kroehler Lounge-Chair Comfort and Style

1. Here's the normal, comfortable lounge-chair position of the Push-Back Theatre Seat.

2. Seated patrons need not stand—a gentle movement of the body slides the seat back.

3. Relax, chair slides back to normal, comfortable position—no standing up, no inconvenience.

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New York 18, N. Y.
206 Lexington Ave.

Dallas, Texas
2023 Jackson Street

Canadian Theatre Chair Co., Ltd., 40 St. Patrick St., Toronto 2B, Canada

KROEHLER *Push-Back* THEATRE SEATS
The World's Finest Theatre Seat

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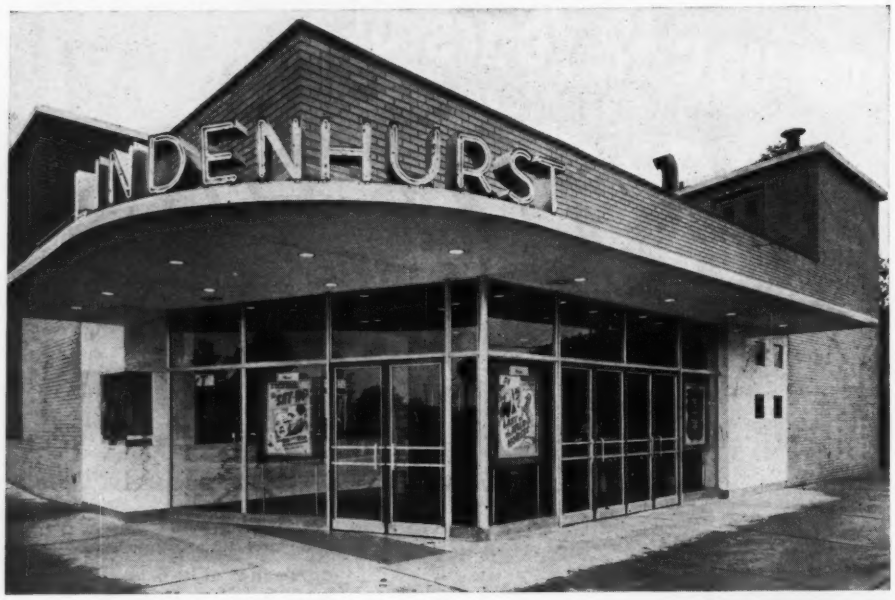
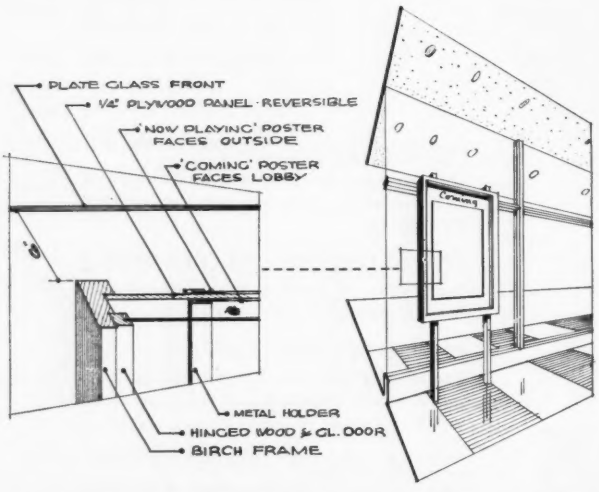
Neighborhood or Small Town Scheme: 770 Seats

THE LINDENHURST THEATRE, LINDENHURST, N. Y. (Long Island suburban and farming area). Owned and operated by the Prudential Circuit. Architect: MAURICE D. SORNIK, New York City. Consulting Engineers: SEYMOUR SEIDER, Mechanical; EDWARD J. CONTENT, Acoustical.

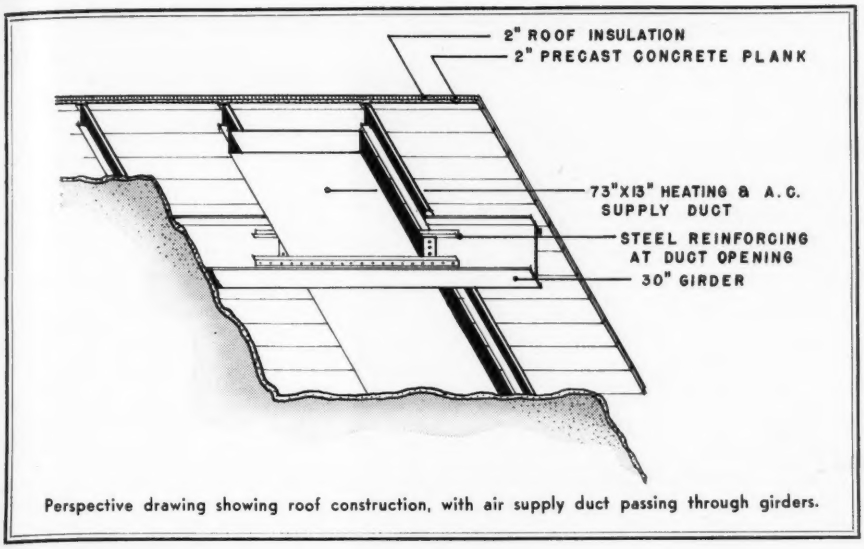


CONSTRUCTION of the Lindenhurst is of masonry and steel with excavation for concrete wall footings only. Walls are 12 inches thick with 4-inch facing of brick in red and grey sections. The side retaining walls follow the contour of the auditorium (see plan), which converges toward the screen area for acoustical shaping (walls out of parallel). For economy, roof parapets and related flashing were eliminated. Erected on steel girders and pillars, the roof is of 2-inch precast concrete plank (7 feet by 16 inches) installed by the manufacturer. On this is 2-inch Celotex for thermal insulation, covered with tar and gravel. Roof drains to the middle, longitudinally, to leaders between roof and ceiling and down walls. Slightly lower in height, the corner lobby and foyer sets between the main section and a penthouse which houses cooling and heating equipment. The lobby is enclosed by plate glass in alumilited aluminum framing, except doors have wood frames. The glazing is flanked by white Georgia marble, continued on the left side into the lobby, enclosing the boxoffice. The latter has an outside and an inside window, to provide for varying conditions of patronage or weather. Protecting this area outside is a simple canopy with soffit continuous with the lobby ceiling, mounting R-40 reflector lamps set flush, in countersunk openings for retamping.



LOBBY DISPLAY: Poster frames are of special construction designed by the architect. Of freestanding type, they are placed along the exterior glazing, with the outer side advertising the current attraction, the inner side the following feature. With change of bill, the poster mounting is removed and merely turned around, the inner side then being changed to the next attraction. Posters are illuminated by lensed downlights.

LOBBY-FOYER AREA: The foyer is visible from the street through inner glass doors. The adjoining side is a partition of corrugated translucent glass (see view from foyer on opposite page), behind which is a lounge section of the L-shaped foyer. A pair of solid flush panel wood doors are set in this partition for supplementary exit. For relief, the Georgia marble of the boxoffice wall frames paneling of striated Weldtex wood veneer (fir) set in squares of triangular pattern, which in turn frames a flesh-colored (copper-backed) mirror (see upper view at right). The lobby ceiling is painted mulberry. The floor is terrazzo in two tones of green. Ceiling and floor of lobby extends into the foyer to effect continuity. Inside, the ceiling forms a cove containing 48-inch Warm White fluorescent lamps slightly overlapped. The foyer-lounge ceiling consists in perforated metal pans behind which are rock wool bats for noise control. Acoustic pans of this type clip to metal members and are readily removable for servicing electrical wiring and, as in this case, the unit heaters supplying the foyer-lounge area (see data on air-conditioning system). The pans come enameled in an ivory tone. R-40 reflector lamps are set flush in the ceiling. Walls are striated Weldtex. Stair carpet is are set flush in the ceiling. Walls are striated Weldtex.



Perspective drawing showing roof construction, with air supply duct passing through girders.

LINDENHURST AIR SUPPLY: The basis of the investigations that led to the design of the heating and air-conditioning system in the Lindenhurst theatre was derived from considerable experience with conventional plants in existing theatres. Conventional steam and hot water plants are heir to piping corrosion troubles and boiler failures due to low water. They are subject to considerable maintenance of air valves, traps, water cut-offs and feeder, condensate pumps, pipe insulation, etc.

They are also subject to considerable standby loss, particularly during light load periods, such as mild weather, or heavy patronage periods. Standby losses are also considerable where theatres operate only matinee and evening shows, or, in general, where load demands are not continuous, but highly varied. It would then appear that a plant that did not use steam might have considerable advantages over one that did, for this type of building.

Working on this premise, a circulating air system for heating suggested itself. The main disadvantage of this system is that it is not adapted to a load of varying levels, such as a theatre with stores and for offices. It would be difficult and uneconomical to operate a central heater to heat just a few stores or offices when the theatre was closed down. But the Lindenhurst theatre has no stores or offices.

Advantages, however, are many. Using a direct-fired heater, all water and steam piping was eliminated, and with it, all the headaches described. The duct system required for warm air distribution is required in any event for the summer air conditioning, so that year round use is made of it.

The heater was placed directly in the duct system, the entire installation requiring little more room than is allowed for the usual "fan and coil room." This eliminated the necessity for a conventional boiler room, and none was provided.

●

Placement of all equipment, including the oil burner on the second floor permitted using the space between the ceiling and roof for a return air plenum, thereby eliminating the need for return air tunnels under the floor. The return air plenum in the balcony also emptied directly into the equipment room. Thus all excavation and underground construction other than foundation was eliminated. An induced draft fan eliminated the need for a masonry chimney. Ducts were run through the webs of the solid rolled member roof girders, thereby cutting down the height of the building by the depth of the ducts, about 4 feet. Summer cooling is obtained by the simple addition of a cold water coil and supply well system to the duct system. The results completely satisfied the requirements that were set. The initial cost was approximately 35 per cent less than a conventional steam system using steam coils in a duct system. The cost of constructing a boiler room, return air tunnels, and a chimney, which was appreciable, was saved. Stand-by losses were reduced to the vanishing point. The oil burner need be started only 15 minutes before the doors are opened, for the patrons to enter a warm theatre.—SELMOUR SEIDER, Consulting Mechanical Engineer.

LOBBY SEEN FROM FOYER

●

TOILET FACILITIES: Practically all plumbing of the men's and women's washrooms are carried in an accessible space between the two rooms. All valves, flushometers, traps, etc., are located in this shaft, which can be entered from a closet off the foyer (see floor plan). Besides making these fittings available for service without wall destruction, this arrangement removes them from the toilet rooms to facilitate cleaning, which is further simplified by hanging all urinals and water closets from the walls, and stalls from the ceiling, leaving the floor clear.

[*Lindenhurst continued on next two pages.*]

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No longer do you need to have unsanitary waste litter in your washrooms . . . or have empty towel cabinets serviced. The new, faster-drying Sani-Dri gives you 24-hour hand or face drying service with a stream of hot air . . . the most sanitary method known. New heating element and faster-flow nozzle drys hands or face 25% *faster than ever before!* Sani-Driers have carried the Underwriter's Seal of Approval for over 18 years. They have given efficient drying service in every civilized country and in every climatic condition!

SAVES 85% OF WASHROOM COSTS

Sani-Dri *pays for itself out of savings!* No buying or stocking of towels. No unsanitary litter . . . no fire hazard . . . no paper-clogged soil pipes . . . no servicing of empty towel cabinets. Sani-Dri gives years of continuous *automatic* drying service with little or no maintenance cost.

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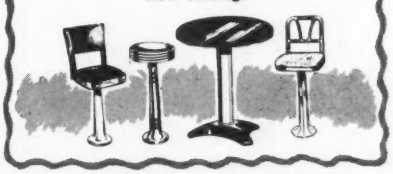

THE CHICAGO HARDWARE FOUNDRY CO.
"Dependable Since 1897"
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GENTLEMEN: Please send literature on the following:

( ) Brochure 1082 on new, faster-drying Sani-Dri Electric Hand and Face Dryer.

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FIRM . . . . . .

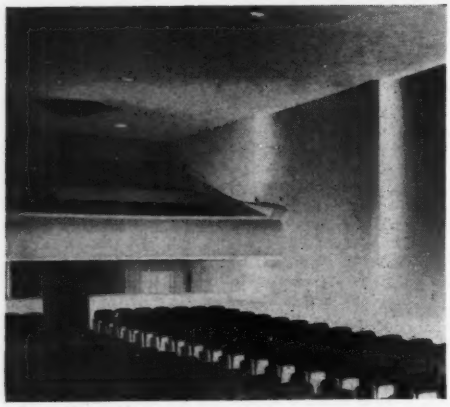
ADDRESS . . . . . .

CITY . . . . . STATE . . . . . .

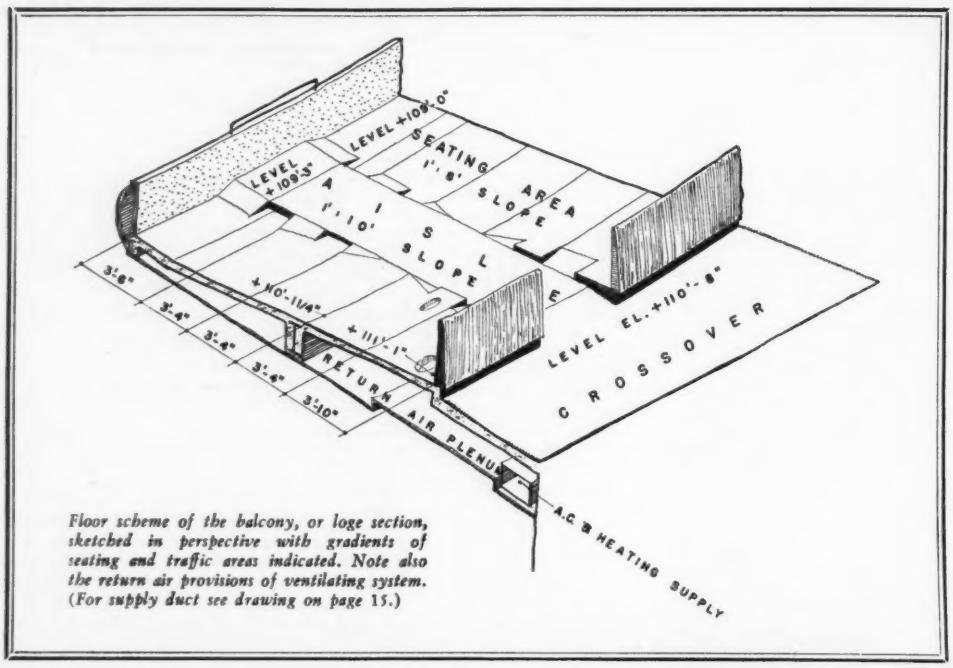
(Continued from page 15)

[PLANS ON OPPOSITE PAGE]

LINDENHURST AUDITORIUM: Above a wainscot of striated Weldtex, which continues across the front, facing the screen platform, the auditorium has side walls divided along the rear two-thirds into furred panels separated by coves concealing lumiline lamps on dimmers. Of hard plaster, these walls are painted in a gradation of tones shading from dark mulberry to almost pastel pink at rear. The ceiling, which is sand-finished hard plaster left natural, breaks near the forward wall to form a cove in the main section containing Par-38 floodlamps that light the gold cloth screen curtain. Through the center of this forward splayed section, and continuing a little way into the main section (total depth of 40 feet), the ceiling is finished in corrugated Transite to break up reflection of screen light, primarily to prevent a glare spot for loge patrons. In the effort to minimize cubage, the auditorium was given a mean height of 21 feet. The main floor seats 629, the loge 143. Row spacing is 36 inches downstairs, 40 inches in the loge, with the chairs, by Ideal, having spring backs on both floors. Downstairs the seats are covered in maroon mohair, backs in green velour. Loge seating is covered in coral mohair.



BALCONY FLOOR: Without the conventional steppings, the upper level provides for traffic and sightline clearances by a combination of uniform ramp for the aisles, and an adjusted curvature for the seating area of the floor. The difference in gradient is compensated for by short slightly ramped entrances from the aisles into the rows (see below drawing and detail photograph at right). With a mean ceiling height of approximately 21 feet, the auditorium is finished entirely of hard plaster (above wood veneer wainscot), except for the rear wall (see discussion by the consulting acoustics engineer below at right). Walls are out ofparallel and the loge parapet is splayed.

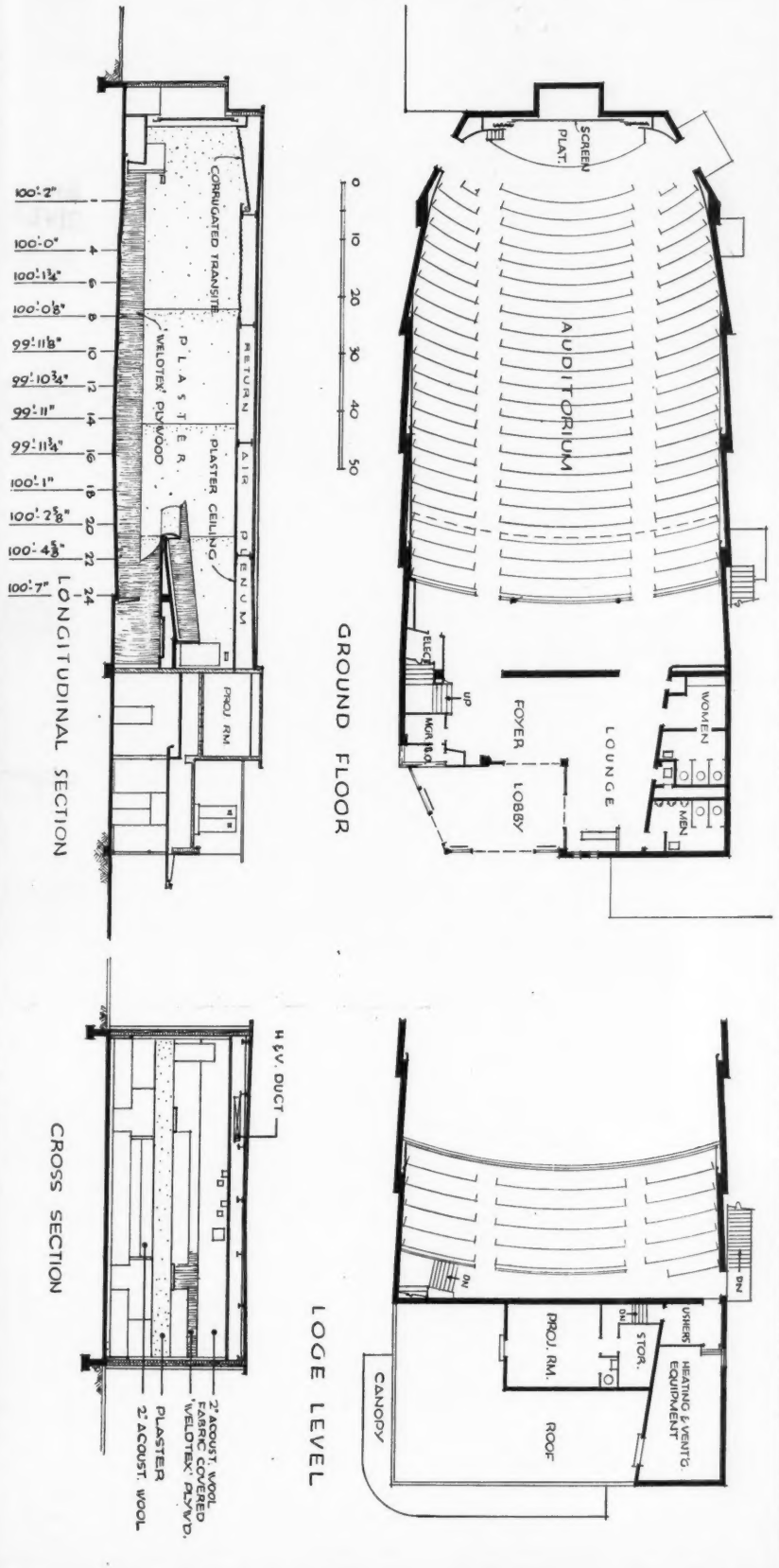


Floor scheme of the balcony, or loge section, sketched in perspective with gradients of seating and traffic areas indicated. Note also the return air provisions of ventilating system. *(For supply duct see drawing on page 15.)*

ACOUSTICAL PROVISIONS: In the design of the Lindenhurst theatre, the architect was able, by the choice of dimensions and shape to limit the cubical volume of the theatre to a point where no sound absorbing materials were required on the ceiling or side walls. Some panels of sound absorbing blankets, covered by a decorative fabric, were used on the rear wall, both above and below the balcony in order to prevent echoes which might otherwise be caused by reflection of sound from these areas. The seats used are of the loge type, having a fairly high value of sound absorption. This provides uniformly good acoustical conditions when both a small and a large audience is present.

The carpeting in the aisles and the crossovers is lined with foam-rubber which also contributed to provide sufficient sound absorption in the theatre. The enclosure for the loudspeakers behind the screen was lined on both sides, back and top, with sound absorbing blanket to prevent any resonance of this space from distorting the sounds emitted by the horns.—Edward J. Content, Consulting Acoustical Engineer.

FLOOR PLANS AND SECTION DRAWINGS
Lindenhurst Theatre, Lindenhurst, N. Y.



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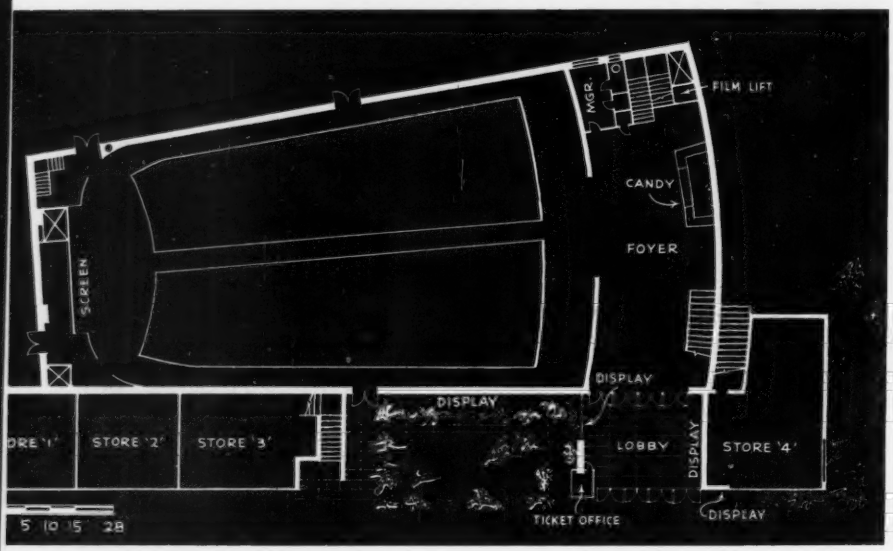
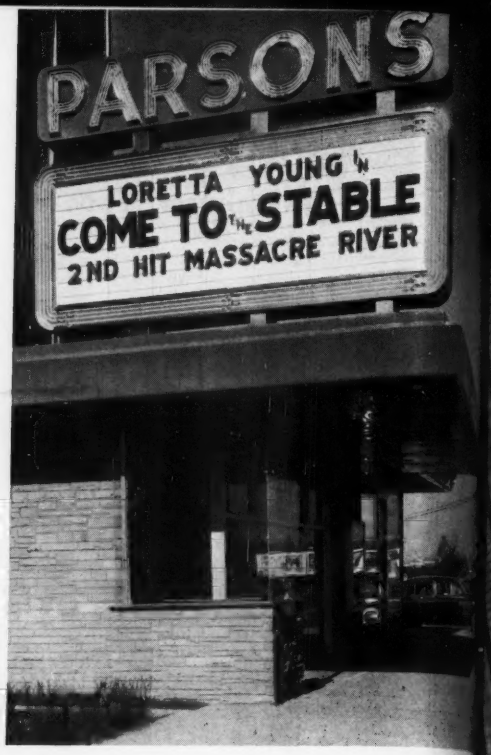
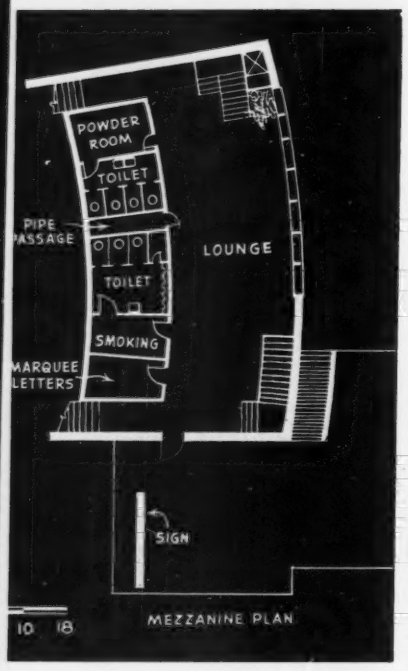
West Park Street Newark 2, N. J.

Design for Community Theatre Service: 1100 Seats

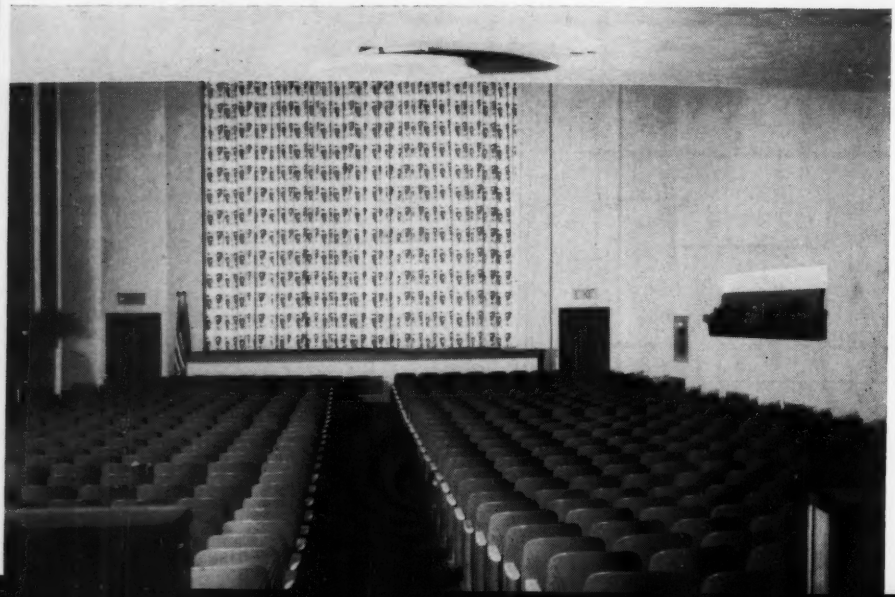






The photographic views and floor plans on this page indicate the design and layout of a theatre erected in 1949 in a developing outlying residential section of New York City (Parsons theatre, Jamaica, Borough of Queens). Samuel Lewis Malkind, Brooklyn, was the architect. The building includes four stores, and the theatre is given distinction as a recreational retreat by the design of its entrance area and in being set off from the commercial space by an intervening plot of grass and plants, distinction further stated in orchard stone masonry.

The Parsons marquee is merely a brief protective extension of the roof of the projecting lobby structure, mounting name sign and Adler attraction advertising equipment, which is serviced from the lobby roof through the mezzanine level (see letter storage space in mezzanine floor plan). Lounge and toilet facilities are on the mezzanine, which is reached by two foyer staircases. With the lobby structure a one-story extension at right angle (see floor plan), the mezzanine has a row of windows which glow invitingly at night from light through a drapescreen of sheer ninon fabric. The mezzanine is pictured at right.



Shape of the theatre building-proper follows the radial pattern of auditorium seating at the rear, and converging lines of the seat plan at the sides (see plan), providing without structural waste non-parallel auditorium walls (acoustic function). Cubage is further kept at a minimum in provision of a balcony by use of a dual incline main floor. The Parsons has a two-bank seating plan with three aisles. Except at extreme front, there are twelve Heywood-Wakefield chairs to the row, spaced 34 inches back-to-back. The main floor seats 760; upper level is divided into loge section seating 112, a balcony seating about 225. Coral is the predominant color of auditorium and foyer; side walls of the auditorium are stucco, ceiling acoustic plaster, all with color mixed in, eliminating painting. Upper 5 feet of rear auditorium wall, and balcony parapet, are finished in acoustic plaster. Auditorium lighting is by downlights; only other lighting consists in a cove illuminating a flower box on each side. Light is played on the screen curtain during intermissions by a projection room spot. (The Parsons is an operation of the Interboro Circuit.)

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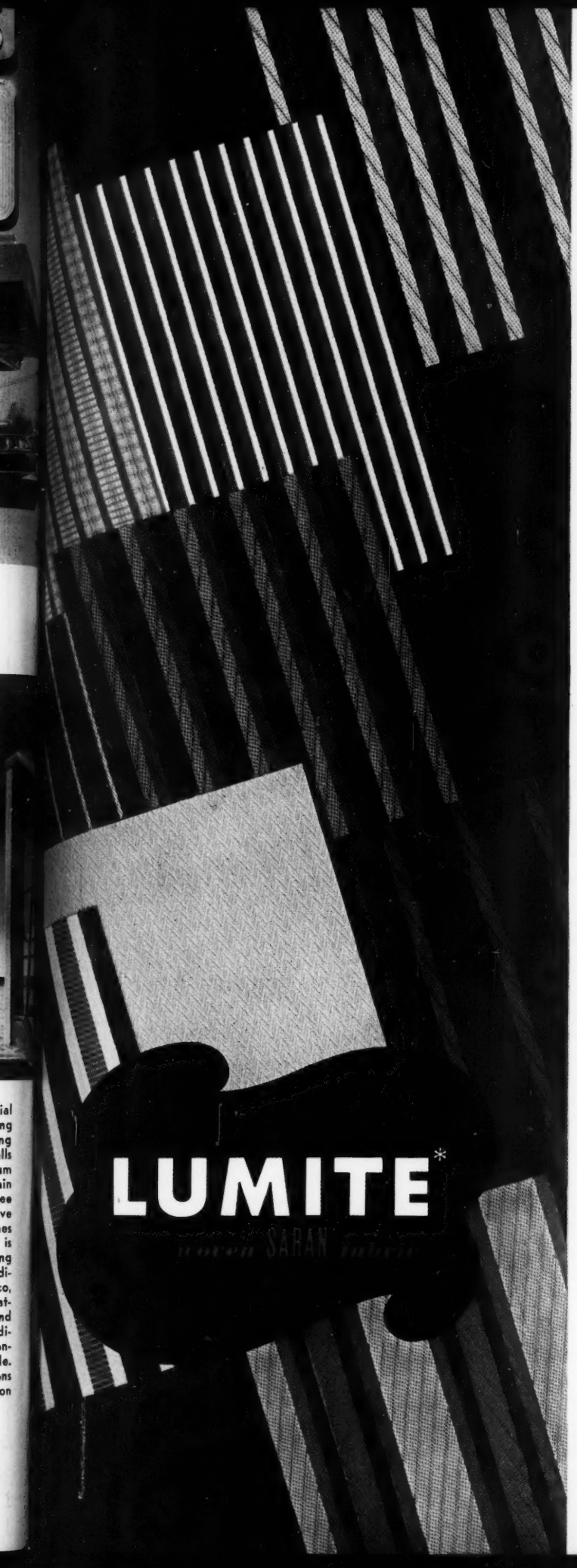

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A Large Image To Make Theatre Pictures Unique

[While the following discussion is relatively topical, its arguments are included among the data of this Edition because the problem that it represents—that of making a motion picture performance in a theatre more dramatically convincing than it can be elsewhere—is likely to be with us for a long time. The material below is from an article in the May 1949 issue of BETTER THEATRES, *by Ben Schlanger, New York theatre architect and consultant.*—THE EDITOR.]

PROJECTION of a large picture in regular (enclosed) motion picture theatres is entirely feasible. Today's 35mm film, with its fine grain structure, permits enlargement of the image up to 60 feet wide and more, without sacrifice of pictorial quality. Projection light sources are equal to the task of providing the screen brightness that greater magnification would entail (also to be considered is the fact that visual acuity is increased as the objective is increased in size).

The projection distance available in regular theatres requires lenses of short focal length. Here, however, there enters another phase of the enlargement. Enlargement of the theatre image is properly related to cinematographic increase in the pictorial *content*—that is, the image would embrace more incidental material, elements of scenery and set and background action that create the environment of the focal action and thus add realism.

The edges of this incidental material would correspond, optically, to the outer areas of one's arc of vision in real life. These are naturally hazy; any distortion at the edges of the large image would have about the same effect.

The increase in size is needed more in width than in height, of course, but that fact is not so important as to suggest changing the proportions of the film frame before doing anything at all about getting a more impressive performance. Producers have long had to wrestle with all kinds of cinematographic problems of this kind, for the present frame was regarded as too high for its width in early years of the art.

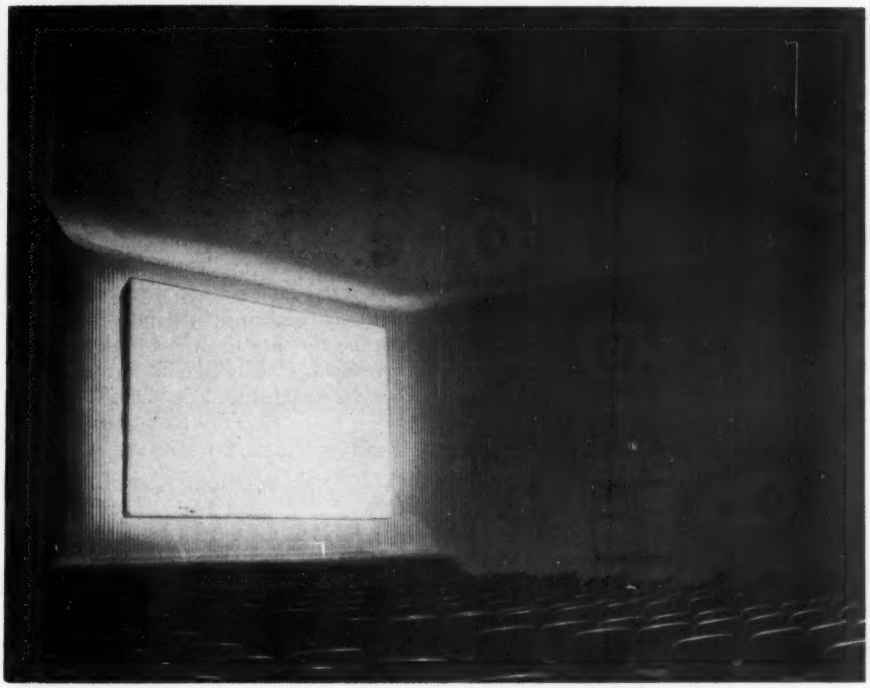
Retention of the present height of the [illegible] would probably pose more of a problem at the theatre end than in production—particularly in theatres having balconies.

The vast majority of existing theatres were ill-suited to sound when it came. They had to find a way, in time, to conform to its demands.

In many cases, the simplest procedure would be to eliminate a few of the rear rows, preferably widening the standee space. A larger picture would also advise elimination of several front rows also in theatres having no more than minimum distance between the screen and first row.

The first step in the project is a broader sweep of action cinematographically, more environmental material to lend realism to the action, possibly "vignetted" effects in the marginal areas of the image.

PICTURE INTEGRATED WITH AUDITORIUM



■ Elimination of a "picture-frame" effect—either by masking or by proscenium opening—is accomplished in the Island theatre, Hamilton, Bermuda (completed in 1949), by placing the screen virtually against the forward wall, which, due to convergence of the forward side walls, is only a little wider than the screen. The image is thus placed in a field of self-created light (which modulates according to variation in film density); with this "natural" field supplemented by light of low intensity supplied by filament lamp strip sources concealed behind the edge of the screen. The latter sources are intended primarily, however, for use during projection of short subjects; when the feature picture opens, they are dimmed from the projection room as the opening scene approaches. Reflection of this screen area light is controlled with reference to the audience by the wall treatment, which is plaster with vertical corrugations angled to reflect the light transversely. These forward walls are painted grey (those around the rear of the auditorium are Acousti-Celotex water-tinted cream. The ceiling throughout is sand-finished hard plaster tinted grey-green. The Island, which seats 650, has a 200-seat radial mezzanine with a parapet whose fascia is grey hard plaster angled to reflect sound downward. (Architect: Ben Schlanger, New York.)

SEATING-SCREEN RELATIONS

Dramatic picture presentation is most effective when the shape and size of the image are favorable to nearly all of the viewing positions in the theatre; and, further, when the cinematography has taken into consideration the relationship between the *position of the viewer* and the *position and size of the picture.*

Most motion picture theatres have some small percentage of ideal viewing positions from which the picture subtends an angle that enables the viewer to see only the picture within his normal range of vision.

Unfortunately, these positions are in the first few front rows, from which the screen is necessarily too high above the viewer. As a result, the uncomfortable viewing angle tends to prevent the effective realism of the picture possible from such positions.

Incidentally, while it is quite possible to sit close to the home television screen, experience indicates that the viewer should keep away from the set a distance at least five times the picture width, because of the "graininess" of the image, the specular characteristics of the television tube. Thus the most effective viewing distances cannot

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be taken advantage of in viewing the picture presented by home equipment.

In the motion picture theatre, seats can be placed as close to the screen as one and a quarter times the picture width, and the picture will not appear too grainy, have any objectionable lighting, or be too high in position for the upward viewing angle. *This ability to sit close enough to have the screen area almost fill the range of vision of the spectator, is peculiar to the motion picture projected in the theatre from films.*

If the seating depth in present motion picture theatres were to be limited to a distance equal to three times the average picture width today, the picture would be large enough for the greatest part of the audience. Under these conditions the picture would occupy a sufficiently large enough area of the field of view of most spectators.

It is common, however, to find motion picture theatres with viewing distances equal to six times the picture width, and more. This ratio of viewing distance to picture width can be definitely termed excessive, and either the seating depth or the picture size has to be increased, until the maximum viewing distance is closer to about three and a half times the picture width.

A compromise consisting in a partial *decrease* in viewing depth (thereby losing some seats), and a moderate *increase* in picture width, may be the most practicable solution for theatres where a picture really large enough would be difficult to accommodate due to structural limitations.

BEN SCHLANGER.

Plan Factors in Reseating:

CHAIR WIDTHS... PICTURE SIZE... CHAIR BACK ANGLES

THERE IS no need to reseat a theatre in the same plan arrangement, and using the same spacing and sizing, and it is advisable not to do this unless one has assured himself that the arrangement is reasonably efficient.

Since the new chairs will be expected to endure many years, it is well to anticipate, if possible, any new developments in the near future which might affect seating conditions. Specifically, an enlarged screen would affect the seating arrangement.

It is true that the chairs can always be lifted and repositioned, but analysis shows that this is costly and impracticable. Besides the actual cost of resetting chairs, there is the consideration of damage to concrete floors.

It is also possible that a reduction in seating capacity may be very desirable to create an improved theatre. On this score alone an unnecessary expenditure may be made because of lack of planning.

GIVING ELBOW ROOM

Under conditions of modern operation, the total number of seats has less meaning than *the number of seats that can be counted as good viewing locations.* Comfortable seating is produced by a properly fabricated chair, liberal row spacing, absence of serious visual obstruction in normal postures—and sufficient width of chair.

Most auditorium chair manufacturers do not make their chair seats greater in width than 21 inches, which is a proper limitation because greater seat widths would permit, often encourage, patrons to shift position, which in turn would cause recurring obstruction of the screen for persons behind. Any width greater than 21 inches per person should be devoted to arm block provisions.

Double arm blocks between each chair would be desirable, but would add to cost.

Reseating time is also the time to check floor slopes, and to review the aisle arrangement to be sure that there is no waste floor area with the present plan.

SEATING AND IMAGE SIZE

The distance of the farthest seat from the picture determines picture size. For some years now the distance from this remote point to the screen has been divided by approximately 5.2 to determine the width of the picture. However, this divisor should be changed *for different seating plan shapes,* the seating plan shape being the form of the *vision area* as determined by depth (*screen to last row*) and width (*distance between side seats the farthest apart*). This table is as follows:

Radio Width to Depth	*Divisor*
1:1	4.6
1:1¾	4.8
1:1½	5.0
1:1¾	5.2
1:2	5.4
1:2¼	5.6
1:2½	5.8

This table is a good guide as to where to place the most distant seats for a proposed picture *width.* Any later increase in width of picture can only make the most remote seats more desirable, and certainly recommended picture widths will not be *smaller* than that which is indicated in the above table. To the contrary, any change in picture size is likely to be towards considerably larger dimensions.

The distance from the screen to the row of seats *nearest* the screen, is very much affected by picture size. It has been generally advised that the distance from the screen to the first row be *at least equal to the width of the picture.*

After determining the picture width in accordance with the above table, it would be advisable to place the first row of chairs at least *one and one quarter times the width*

SAFE AUDITORIUM PLASTER CEILINGS

PLASTER of an auditorium ceiling must be held *permanently* in place for the safety of the patrons.

Diamond mesh and rectangular mesh expanded metal lath, as well as the ribbed or corrugated types, when installed properly, make a strong and rigid foundation for holding the plaster in place.

So-called hard-finish plaster consists of lime putty and plaster of paris, to which marble-dust is sometimes added.

Hard finish can be obtained also by mixing about four parts of Keene's cement to one part of lime putty or hydrated lime. Keene's cement plaster is about the best to use in theatre auditorium work (it has less of a sounding-board effect).

The use of hard finish on the ceiling has advantages—it will not chip or powder easily, will not catch dirt and dust as readily as soft plasters. It provides a good base for acoustic tiles.

It is best to hang an auditorium ceiling with special hanger-brackets.

Before installation of wire lath care should be taken that it is either painted, or has a good protective coating, to prevent initial corrosion until the lath can be covered by the plaster.

Wire lath should be of the galvanized type where there is danger of moisture reaching it while it is without a protective coat of lime or plaster.

For the auditorium ceiling, the wire lath should be of the type having either diamond-shaped or rectangular meshes, or expanded metal of about No. 22 gauge, weighing not less than 3¼ pounds per square yard. The wire lath has to take the plaster freely, key it thoroughly and wholly embed itself in it.

For auditorium ceilings, wood laths and plain sheet laths should be avoided.

NARROW TRAFFIC AREAS

For finish in the chair rail area, passageways, stair wells, etc., a sand or plain cement finish, or Keene's cement, should be used.

When plain cement plaster is used, it should set and dry for at least a week before painting. It is strongly alkaline, even caustic, when fresh.

If the paint job must be done soon after the cement plaster has set, wash the surface several times with a strong solution of zinc-sulphate, the sulphuric acid of which unites with the lime. There also are preparations on the market for thus treating cement plasters.

—JOHN J. SEFING.

[For maintenance of hung ceilings see page 41.]

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HEYWOOD-WAKEFIELD
EST. 1826

COMFORT Builds Profitable Patronage

THE EXPERIENCE of operators from Coast to Coast shows that Heywood-Wakefield seating builds profitable business. The extra comfort of these handsome chairs makes patrons *want* to come back. Be sure to see the wide range of current models—and learn the many money-saving advantages of Heywood-Wakefield construction. Call your nearest Heywood-Wakefield distributor or one of our sales offices in Baltimore, Boston, Chicago or New York. Heywood-Wakefield, Theatre Seating Division, Menominee, Michigan.

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of the picture away from the screen. This would be a compromise that would come close enough to present and future requirements for comfortable vision.

CHAIR BACK ANGLES

For a practical simplification of this factor, main floor seating can be divided into two equal groups. Let us call the front half of the seating (nearest the picture) the first group.

***Group* 1 calls for a maximum slant (angle backward from a vertical plumb line) of approximately 24°. (Actually it should be greater to allow optimum vision of the upper portion of the screen with the least amount of eye raising and head lifting; unfortunately, this angle cannot be increased much more than 24° without use of a head rest.)**

In *Group* 2, an angle of approximately 20° is advisable, because the viewing angle to the upper portion of the picture is somewhat eased, since the subtended angle to the picture decreases with distance.

BALCONY BACK ANGLE

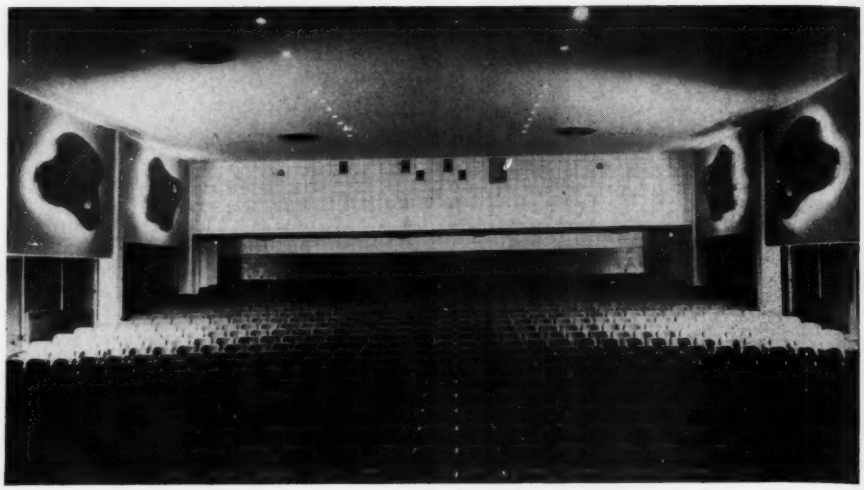
In the balcony, the chair back angle should decrease further, so a compromise angle of approximately 15° is recommended (although some of the steeper balconies could well use an even smaller angle).

Angles greater than 15° in the balcony cause the spectator to see *above* the picture and into the auditorium ceiling, unless he leans forward away from the support of the back of the chair.

It is only practical to undertake a reseating job not merely as replacement, but rather as a possible improvement of the exhibition machine.

—BEN SCHLANGER.

A CONTINENTAL SEATING PLAN



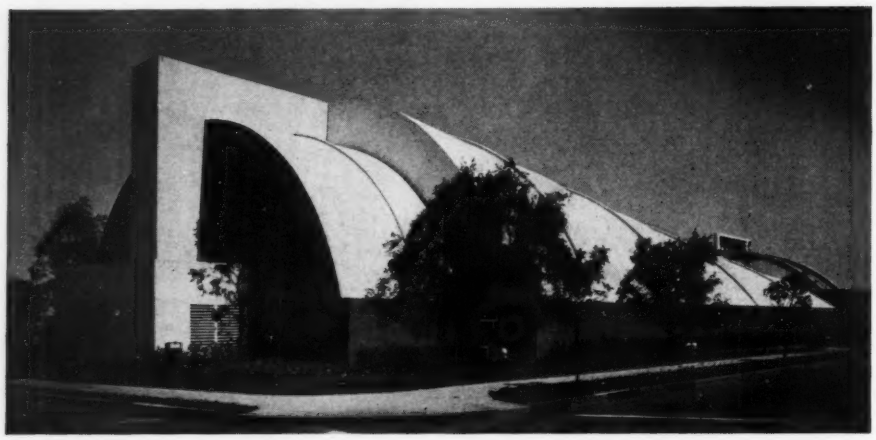
THE WILLOW theatre in Willowdale, a suburb of Toronto, supplies a North American example of Continental seating in which the essentials of its application have been effectively worked out. There are approximately 1000 seats, all on one floor. Rows average 35 seats from wall aisle to wall aisle, and chairs are spaced 40 inches back-to-back. Seats here are not of the self-raising type. The National Code of Canada calls for 22 inches of clear walkway between rows with the seat in a vertical position. At the Willow, the clear walkway between rows, with the seat in a *horizontal* position, is approximately 15 inches. This is a *guaranteed* clear walkway, whereas a clear walkway of 18 inches is obtained with the cushion in a *vertical* position, using a chair with self-raising seat.

Sixteen inches of clear walkway would require, when not using a chair with a self-raising seat, an average of 42 inches back-to-back in row spacing. A distance of 16 inches provides ample walkway.

At the Willow side aisles are housed in relatively low structures (one side is pictured here), opening internally through arches and pierced externally by a series of exits. The aisle structures, partly by reducing volume, aids acoustics while reducing construction costs. The only absorption material is tile on the rear wall. (*Architect*: Herbert G. Duerr, Toronto.)

ARCH CONSTRUCTION IN FUNCTIONAL FORM FOR AUDITORIUM ENVELOPE

FUNCTIONAL motion picture theatre design was carried to the entire structural form of the auditorium envelope in a theatre which opened in 1949—the Baldwin, Los Angeles (Fanchon & Marco operation). Designed by Lewis E. Wilson, Los Angeles architect, it was built of wood and concrete, the wood frame consisting in laminated wood trusses supported by concrete piers. Steel would have been used had steel I-beams of suitable curvature been available. Cost was placed by the architect at $160 per seat.



The truss construction uses arches of diminishing height toward the front of the building. The form of the auditorium, which occupies almost all of the floor plan, can be likened to a funnel sliced in two the long way, with the larger end at the screen opening. The ceiling of the auditorium is 25 feet high at the rear, 45 feet high at the screen end. The arches are elliptic, rather than circular, however. Width at the screen end is 85 feet, 110 feet at the rear.

Mr. Wilson stated that this form represented a saving in volume because it eliminated forward width and rear height where space is wasted by straight wall and flat ceiling design. The building itself more or less follows the radiating form of the seating plan in its converging widths, and also the shape of the projection beam.

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For the combination of high-quality and high-value this Irwin "Comet" Chair establishes a new standard — invites comparison. It's smartly styled and replete with structural superiorities. For instance: The smooth steel seat bucket completely seals working parts — no bolts or screws to snag clothing; a silent automatic seat lifting mechanism lifts seats to identical three-quarter fold; there's a compensating feature for radius and inaccuracies in floor; closed steel, full depth panel center standards; full length back panel to protect seat cushion, with curled edge in back to protect upholstering; and it is, by long odds, the easiest chair on the market to reupholster. Compare it for style, for construction and price. It represents an outstanding value in theatre seating. Deliveries are made with reasonable promptness. Write, NOW, for complete details.

Irwin Seating COMPANY

GRAND RAPIDS, MICHIGAN

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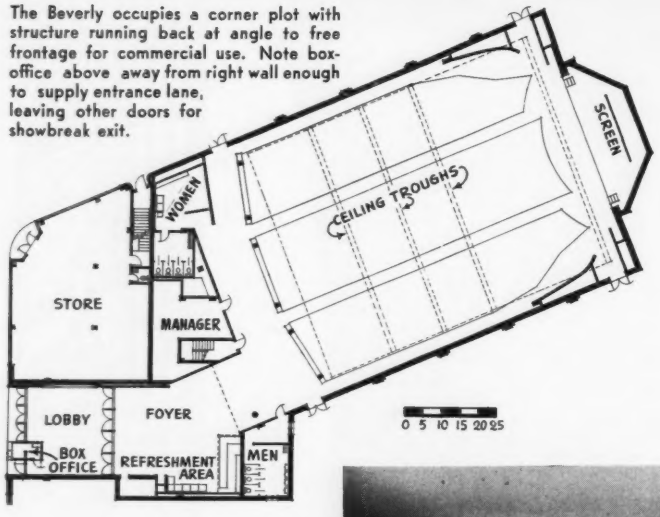
Design for Business District Corner: 978 Seats

THE BEVERLY THEATRE, BRIDGEPORT, CONN., designed for Perakos Theatres, New Britain, Conn., by WILLIAM RISEMAN ASSOCIATES, Boston.

The Beverly occupies a corner plot with structure running back at angle to free frontage for commercial use. Note box-office above away from right wall enough to supply entrance lane, leaving other doors for showbreak exit.



The women's cosmetic room (above), off one end of the standee, is partitioned therefrom by a wall of doublex translucent glass, with entrance along a baffle wall, there being no door.

The fieldstone and redwood siding of vestibule and lobby are carried a short distance in the foyer (left). Elsewhere the foyer walls are partly birch flexwood, partly blue Kalistron, with white plaster ceiling mounting hi-hat fixtures. The lounge area is just off traffic lanes to allow leisurely patronage of refreshment bar.

With a rustic touch in fieldstone, the Beverly exploits an atmosphere of leisure in distinction to surrounding business buildings. The marquee, mounting a Wagner attraction panel and name signs, is virtually an element of the lobby, whose walls of fieldstone on one side, redwood vertical siding on the other, are continued beyond Herculite entrance doors. The white enamel soffit and white-painted gypsum lobby ceiling with hi-hat fixtures are optically continuous.

The auditorium of the Beverly has side walls covered in blue velour furred out over rock wool, above a hard plaster dado. At the screen end, however, plaster baffles are erected from floor to ceiling, to reflect screen light in augmentation of the downlighting, with the baffles vertically fluted to prevent glare. The ceiling is suspended in a sound-diffusing formation with deflecting splayed fascias. Free of the walls, it carries neon along the sides, and floods in front for the screen curtain. The latter, operating on Vallen control equipment, extends from ceiling to floor.

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MORE DRIVE-INS INSTALL WAGNER LETTERS AND FRAMES

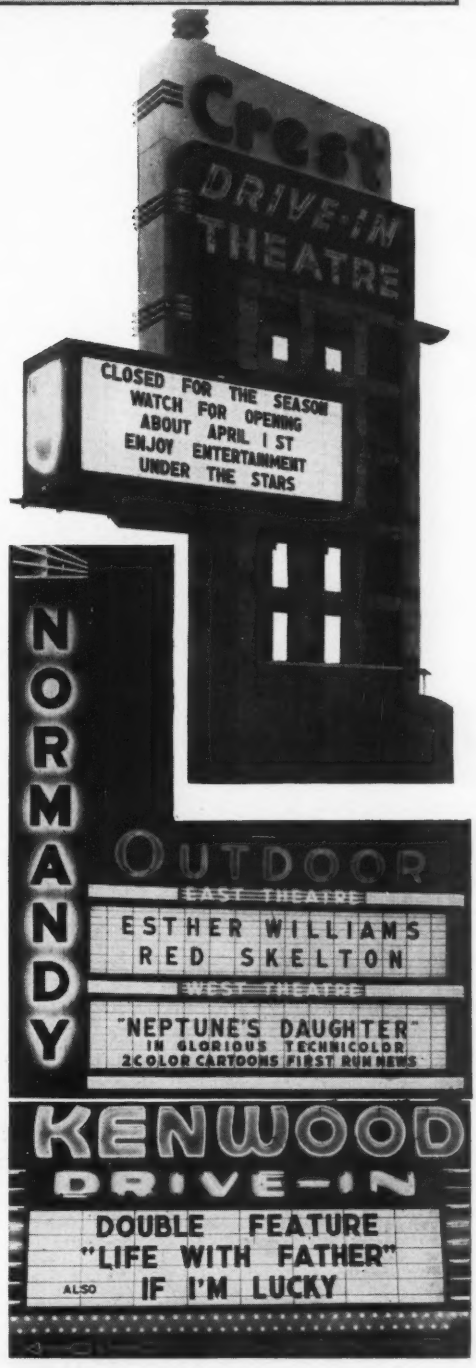
because they permit more effective show-selling

Wagner frames make possible larger, stronger SINGLE panels. This is vitally important with drive-ins because of the setback from the road and speed of passing traffic. The attraction board must be large to be effective. Wagner single panel frames can be built in any size! Then, too, Wagner frames are more economical to service. Lamps, neon and glass can be replaced in any section without disturbing other portions and WITHOUT REMOVING FRAMES. This feature is exclusive with Wagner.

Wagner translucent plastic letters permit a more colorful, more attractive display because of the wider range of sizes and colors. They are available in red, blue, green, amber and black in 4", 6", 8", 10" and 17" sizes. Only Wagner letters are pressure-adjustable form easy slide to hurricane-proof. By a simple adjustment of the bars, they can be locked in place so that they will not slide nor blow off the board. These strong, shock-proof letters are furthermore the only ones that can be stacked without warping. The patented slotted method of mounting prevents freezing to the sign.

Wagner also offers the world's largest range of sizes, styles and colors in aluminum letters.

Wagner Letters and Frames are the Show-Sellingest Medium Ever Devised. They really bring in the shekels.



USE COUPON TO REQUEST CATALOG ON EFFECTIVE SHOW-SELLING EQUIPMENT

WAGNER SIGN SERVICE, INC.
218 S. HOYNE AVE., CHICAGO 12, ILL.

Please send BIG FREE CATALOG on Wagner show-selling equipment, the largest line in the world.

NAME .....
THEATRE .....
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CITY & STATE .....

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EXPLOITING THE OPENING OF A DRIVE-IN THEATRE

FOUR WEEKS before opening date for a new drive-in is a good time to start reaching out for patrons. The writer has found that small teaser ads in daily and weekly newspapers throughout the drawing area are excellent interest-whipper-uppers. These follow the general pattern of:

"Something in entertainment for the whole family is coming to ——— County. Watch for the Opening Date."

A good many people will by then be aware of the construction work, some by virtue of a sign at the site near the highway, others through word-of-mouth. Then a couple of weeks before opening the entire area should begin reading stories about it in the newspapers. A new drive-in is news. Besides it's an advertiser.

These advance "readers" assure the area early completion of the project, and give a certain amount of information about the physical characteristics—the size, the effort made to assure "perfect" vision of the picture, the refreshment and supplementary recreational facilities, and so on.

OPENING "CO-OP" ADVERTISEMENT

Opening time should bring a "co-op" advertising section in the top newspaper of the area. But work on this has to be started at least a month, and preferably six weeks in advance. Stories to accompany the advertising will have to be prepared, and advertising solicited from at least local businesses that supplied materials and service, and others which have a "goodwill" interest in the enterprise. The newspaper benefits from this advertising revenue, the drive-in from the publicity.

Besides a main general story on the location, facilities, policy, etc., there should be shorter supplementary stories on such subjects as the opening attraction with mention of other pictures soon to follow; on the operators and the manager; and on some feature of the theatre, such as the children's playground, the refreshment service, accommodations for games, etc. And of course there should be pictures—of the theatre, and at least of the manager if not also the owner. The "co-op" should immediately precede opening.

Also just before the opening, the newspapers of the area should carry ads of substantial size on the theatre, exploiting the service of a drive-in institutionally as well as the opening attraction. The institutional angle is important anywhere, but particularly so where few, if any, people are acquainted with this unique type of recreational enterprise, which is likely to remain the usual situation for a long time to come.

INSTITUTIONAL MAIL BROCHURE

To get thoroughly across the idea of what a drive-in is, the distinctive service that it performs, takes more than routine effort. Newspaper space can do a good job—but can one depend on it altogether? Study of the drawing area may indicate that one had better supplement it with direct mail exploitation, getting up a folder —probably four pages measuring around 6 x 9 inches will suffice—and mailing it to the homes of all car owners and telephone subscribers in the drawing area.

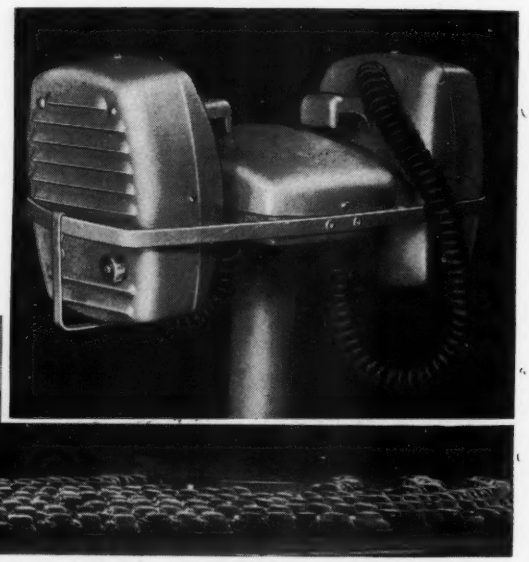
Besides indicating the location of the

GOOD NEWS FOR DRIVE-IN EXHIBITORS!

NOW

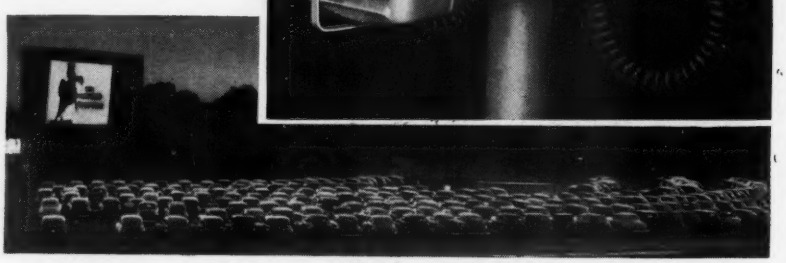
YOU CAN BUY THE NEW IMPROVED 1950 MODEL

De Vry In-Car Speaker . . . . . for only $8.75



This noteworthy new in-car speaker is not just another unit built to a price, but an improved model of the time and field-tested, top quality DeVry in-car speaker that is providing many hundreds of drive-in exhibitors with trouble free performance night after night, year after year. Rugged aluminum construction with preferred wear-resistant alumilite finish. Light weight and compact for sure, easy handling. Waterproof speaker and speaker housing engineered for high fidelity sound reproduction. In every respect it's the thrift buy for 1950.

DEVRY IN-CAR SPEAKERS..each $8.75 JUNCTION BOX..each $6.00



They Come Back Again and Again to See Hollywood Finest Productions at Their Projected Best With Dependable DeVry's.

Dependable DeVry "12000 Series" Projectors

The better engineered, better quality equipment priced within the budget of every exhibitor. The projector with sound head and picture mechanism in one complete unit. Performance proved in the World's finer theatres as "a great pair to draw to for a full house."

NOW! Famed DeVry "12000 Series" AMPLIFIERS

At New Low Prices

A Model for Every Size and Type of Drive-In Theatre

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Please rush information on ☐ DeVry In-Car Speakers ☐ "12000 Series" Projectors ☐ "12000 Series" Amplifiers.

Name .....

Address .....

City .....

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For the Perfect Show Indoors or Out Your Best Buy is a DEVRY

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Want to Cut OPERATING COSTS?

REPLACE WITH GE DRIVE-IN SPEAKERS

Available in 4" and 5¼" sizes

...They're made to save you money!

THE most exposed parts of your theatre equipment are your in-car speakers. Subjected to blistering sun, soaking rain, or swirls of clogging dust, they must still deliver clear, acceptable sound in your patrons' cars night after night.

General Electric makes a specialty of speakers for drive-ins... builds them to resist heat and humidity... tests them again and again for construction and performance to give you a product that is unsurpassed in the drive-in field!

Study the features of a G-E Speaker: Aluminum Voice Coil—won't warp or buckle to cause buzz, rattle, or speaker failure! Special cork gasket holds the speaker straight within its housing—won't expand when wet! Zinc-finish metal parts resist corrosion—or even tarnish—long past the point at which untreated metal begins to rust and peel.

Drive-in operators who specify in-car units made by General Electric find that their replacement costs come down—and stay down!

RAIN CAN'T HURT IT! SUN CAN'T WARP IT!

Made of treated aluminum, the voice coil base of the speaker contains no paper or fabric to buckle or warp. Entirely unaffected by moisture, it helps insure faithful reproduction regardless of weather conditions. For all-around speaker quality that licks drive-in problems, you can't beat General Electric. The coupon below will bring you one of these G-E Voice Coils—it's worth the attention of every drive-in operator.

SEND FOR *FREE* SAMPLE VOICE COIL!

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Electronics Park, Syracuse, New York

I am interested in G-E Speakers for drive-ins. Please send me full information plus G-E Voice Coil in Humidity Test Package.

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You can put your confidence in—

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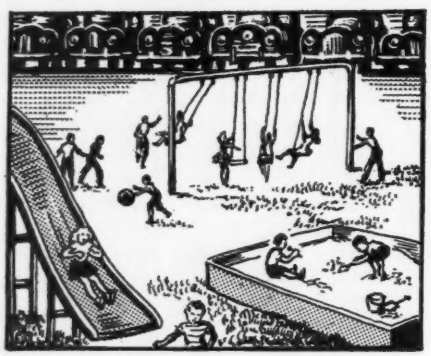
FOR EXPLOITATION OF THE DRIVE-IN IDEA

■ A folder or booklet mailed throughout the drawing area is an effective means of (1) making sure, by a highway map, that as many people as possible know where the drive-in is located; and (2) explaining the recreational advantages and services of a drive-in. The latter purpose is aided by sketches like those below. These of course may be reproduced for either letterpress or offset printing; and adjoining each is suitable caption copy.

The Blank Drive-In is a theatre for the whole family — from the youngest to the oldest member—to enjoy themselves together, comfortably in their own car. That gives privacy, too . . . so come as you are—there's no need to "dress up." And no need to hire a baby sitter! Bring Baby along—bottle and all!—we'll be glad to warm the bottle for you if you like at our refreshment stand.

You can enjoy a snack in the comfort and privacy of your car at the Blank Drive-In—or if you prefer, have it at the conveniently located refreshment stand. You'll find it spic-and-span and equipped for quick service. Either there or brought by a courteous attendant to your car, refreshments are available in wide variety, both hot and cold, to satisfy your hunger or quench your thirst.



Come early to the Blank Drive-In and let the children burn up some of that energy in the playground. It is equipped to provide youngsters with safe, healthful activity. There are swings, slides and rides—and a sand box for the tiny tots. The Blank Drive-In playground is completely isolated from all traffic, yet handy for supervision. A trained attendant is on hand to keep things in order.

Courtesy, neatness, safety are watchwords at the Blank Drive-In. Uniformed, carefully trained attendants are ready to serve you. Traffic is smoothly directed by experienced officers. Nothing is allowed that might offend. . . . This goes for mosquitos, too, and other insects. A truck with the new scientific "fogging" equipment regularly sprays the entire area. You don't know it—but the mosquitos do!

drive-in clearly, the folder should sell the recreational diversity, convenience and privacy of a drive-in. These are its advantages over other places of amusement. The whole family can go without dressing up. No baby-sitter need be hired. Aged and physically handicapped persons need not be denied the pleasure of motion pictures since at a drive-in they don't have to get out of their car. This is the essential theme of the mailer sent out a few days or a week before opening date.—WILFRED P. SMITH.

Copy explaining the services of a drive-in is given in adjoining columns, with reproducible drawing illustrating these services.

•

The Drive-In Manager and Staff

EVERY MAN, woman and child entering the grounds is entitled to utmost courtesy, service and safety. It is the manager's objective to make of each one a *friend of the theatre*. That objective is not realized merely in the manner of direct contact, but in the way the place is kept up, the standards of operation.

A drive-in manager doesn't have to bother about a ventilating system, condition of auditorium chairs, etc.; he has their counterpart, however, in such things as ramps and drives after a rain, lawns and shrubbery, playground and other recreational equipment, refreshment services considerably beyond those of conventional theatres.

If he has come from the regular theatre field, he will discover that his new job requires him to be, in addition to much that he has previously been, including a showman, something of a horticulturist, a highway engineer, a park superintendent, and a traffic cop.

The manager should be on the job at the theatre at least a half-hour before time to receive the public, going on duty neatly dressed. If a sport jacket and slacks are appropriate to the situation, the colors and style should be conservative. The shirt should be white, and be worn with a tie regardless of the weather.

TOLL GATE OPERATIONS

Operations at the ticket or toll booths need the manager's close supervision. He can't be there all the time, but he should keep tabs on it. His attitude should definitely not be one of suspicion, but rather that of normal responsibility and availability for help in this all-important close contact with the public.

Even in a rush hour the cashier may get telephone calls from people wanting to know what is playing; or about conditions should there have been rain during the day, or when there is threat of unfavorable

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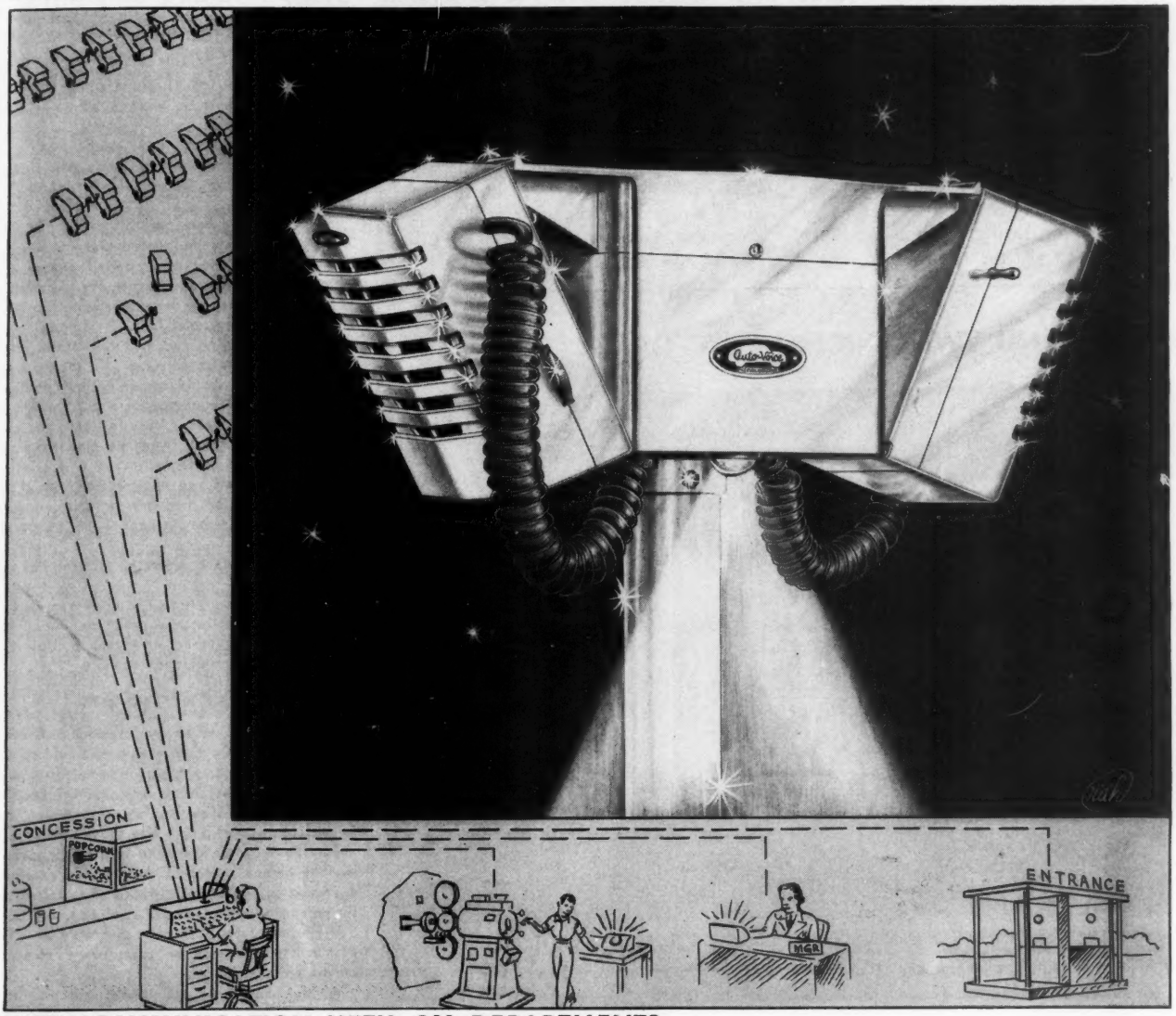
Auto-Voice 1950 ACOUSTI-MATIC in-car SPEAKERS...



INTERCOMMUNICATION WITH *ALL* DEPARTMENTS

Auto-Voice 1950 ACOUSTI-MATIC

SPECIFICATIONS

Mirror-bright Polished Corrosive Resistant Aluminum Alloy Castings

Lifetime Usage

One Year Guarantee

Obtainable with or without Talk-back

Aluminum Voice-Coil for perfect outdoor reception

Your Theatre name imprinted on each speaker cabinet

500 Watt Heaters

Ramp Beacon Lamps available

Here's the new, gleaming, mirror-bright in-car speaker you've been asking for—it's like a jewel set in a pool of stars. Make it easy to order refreshments with Auto-Voice Talk-Back system with the patented simple one wire layout. Increases concession sales beyond expectations.

This flexible system permits intercommunication of ALL operating departments with each other by a flick of a key. Operate YOUR Drive-In like a modern business.

Your inquiry will receive prompt attention and complete information will be furnished you.

APPROXIMATELY 10% OF DRIVE-IN THEATRES IN THE U. S. A. ARE EQUIPPED WITH AUTO-VOICE

DRIVE-IN THEATRE EQUIPMENT CO., Inc.
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weather. The telephone must be answered, and answered courteously; patiently.

The rules here are the same as for regular theatre operation—a complete schedule of performances posted where the cashier can refer to it quickly, with names of the stars, times for the feature, prices of admission. Patrons occasionally will ask, "Is the picture good?" The answer is: "It has received very favorable notices, sir (or madam)."

All replies should be *efficient*, not abrupt, and include "sir" or "madam." Questions that are too difficult, or out of line, can be handled by saying, "I'm sorry, but I shall have to ask the manager as soon as I can locate him. Perhaps you'd like to call back later."

GENERAL ATTENDANTS AND OFFICERS

Special officers having the authority of deputy police should be between the ages of 35 and 45. Other attendants should not be under 21, and 35 is a preferable top limit. For a drive-in staff, married men are preferable to single men. Especially are married men with at least one child likely to have the required sense of responsibility.

In any case, attendants should not be hired unless they can give at least three acceptable character references; and preference should be given local young men who are gainfully employed in the daytime and want the drive-in job to increase their income. They must be healthy and energetic.

STAFF CONDUCT AND DUTIES

Management of many drive-in theatres will find most if not all of the following instructions suited to their operations:

1. Uniforms must be neat at all times, and include *dark* neckties.
2. Each outdoor attendant should wear a white coat and cap and carry a flashlight. If any of these items is lost, he is responsible for its replacement.
3. No employe may park his car in the theatre area, but only in a designated place outside.
4. Attendants may never permit anyone to use an exit gate for entrance under any circumstances.
5. No attendant can be excused for arguing with a patron. He must not lose his temper. He can be firm in carrying out his instructions, but he must be always courteous. If the patron is obstreperous he should excuse himself politely for the purpose of "inquiring" of a person with more authority, then calmly go to get an officer-attendant (who should wear an authorized police uniform), or the manager.
6. All accidents, no matter how trivial, must be reported to the manager, or chief of service.
7. No employe may accept a tip or any form of gratuity.
8. Use of profane language assures immediate dismissal.
9. No employe is allowed to chew gum or smoke, or take an alcoholic drink while on duty.
10. No staff member other than a projectionist is allowed in the projection room.

RULES FOR RAMP ATTENDANTS

Report in uniform ready for work at least five minutes before the time you are scheduled to go on duty.

When given your ramp assignment, immediately inspect all mechanical equipment to make sure it is working properly, and pick up any litter.

Direct every car driver to a speaker post. See that he gets a speaker and that occupants of the car know how to operate it. At show break watch for patrons who neglected to replace speakers.

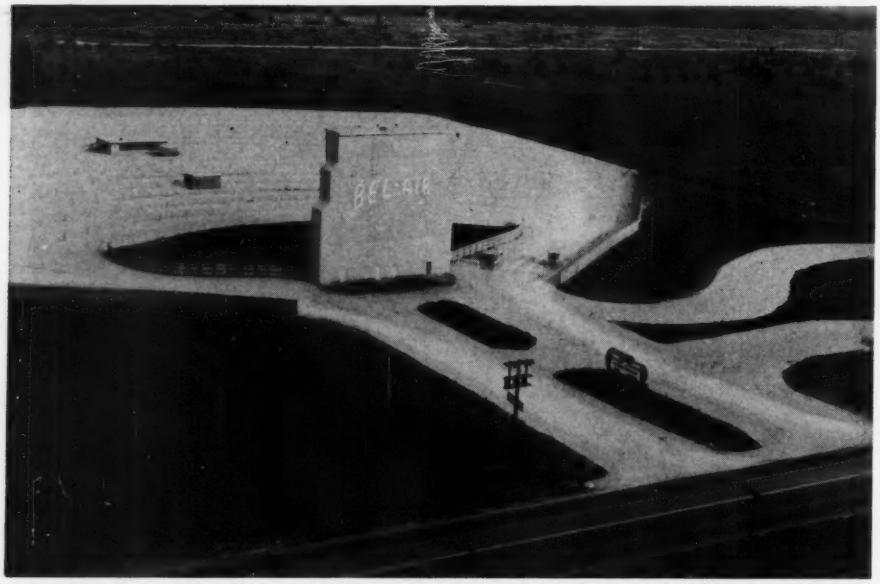
While on duty, hold no conversations with the cashier, ticket taker or refreshment stand employes.

At the show break go to the exit end of the ramp to which you are assigned to aid traffic flow to the highway.

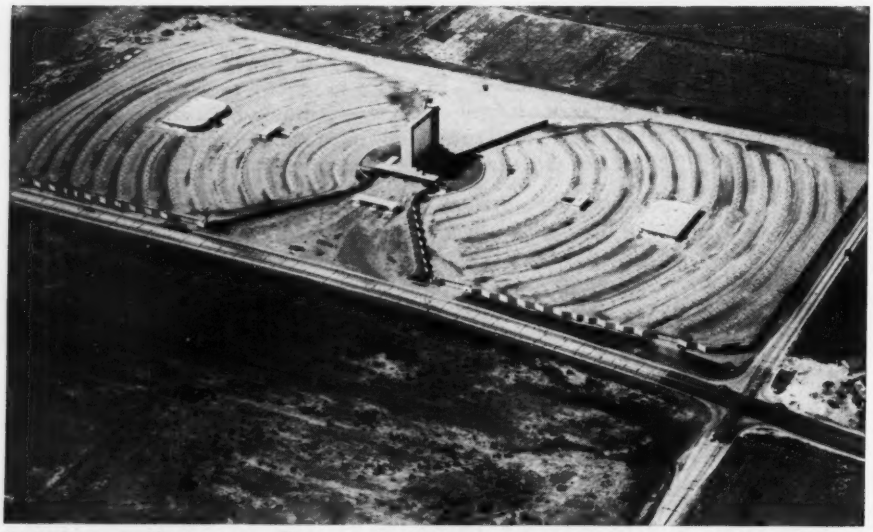
Know the schedule of shows and other things about the operation to be able to answer questions without leaving the ramp.

If you observe anyone definitely drinking an alcoholic beverage, avoid giving any indication of your observation and notify an officer or the manager.

SINGLE AND TWIN DRIVE-IN LAYOUTS



The Bel-Air drive-in, Joliet, Ill., a simple concentric plan with entrance to right of screen tower, exit at left into lane parallel with entrance lane, off side of which is a storage loop. The Bel-Air is a 1,000-car drive-in presenting a 60-foot picture. Admission is by register-printed tickets.



"Twin Open Air Theatre," near Chicago, with 600-car ramp system on each side of a central screen tower, under which cars pass to opposite side for feeding into ramps.

Drive-In Traffic Lanes and Control

RECOMMENDATIONS of the American Association of State Highway Officials for drive-in ingress and egress provisions that will not interfere with public traffic arteries, are as follows:

Theatres should not be located on major highways, but on secondary connecting roads.

Theatres should not be located on major two-lane highways.

Theatres should be located in districts already partially built up to avoid the creation of new congestion areas.

Theatres should not be located where view of the entrance is obstructed.

Theatre screens should not be permitted to face the major highway.

Where screens must face the highway, a fence or trees should be used to obscure its view.

On two-lane roads where left turns are permitted, the entrance should not exceed 40 feet in width.

On three or more lane highways where left turns are prohibited, the entrance lane should not exceed 14 feet in width.

On three or more lane highways where left turns are prohibited, the entrance should not be over 19 feet wide.

Entry turn speeds of 20 miles per hour should be provided for right turn movements.

Entry turn speeds of 10 miles per hour should be provided for left turn movements.

Separated entries should be provided for right and left turns where arrival volume is nearly equally divided by direction.

Not more than one exit should exist for each access highway, and no more than one lane should be permitted for each direction of travel.

Where left turns are prohibited, the exit should not be more than 14 feet wide.

Where left turns are permitted, the exit should not be more than 19 feet wide with a small island in the throat.

Acceleration and deceleration lanes should be used if possible.

Cuts should not be made in the medial island on multi-lane highways to permit left turns.

Where breaks in the island are provided, they should include provision for special left turn deceleration and acceleration lanes.

The problems of storage between the ticket gates and the highway are primarily a function of the number of ticket gates. One ticket gate should be used up to 300 car capacity theatres; two ticket gates should be used up to 600 cars; three ticket gates up to 800 cars; four ticket gates up to 1,000 cars.

Storage facilities need not be greater than 30% to 40% of the capacity.

Few theatres now use traffic signals. Due to the unusually short peak periods the use of traffic signals is questionable. If traffic signals are used, they should be of an actuated type. Flashing beacons should be used only where sight is limited. Traffic control is best handled manually.

•

Screen Lighting at Drive-In Theatres

AT THE PRESENT time there seem to be three general classifications of the projection arc lamps used in drive-ins. One is the 14-inch reflector type, using 8 mm non-rotating suprex carbons at 70 to 75 amperes, capable of delivering 14,000 to 15,000 lumens. This lamp has been modified in some cases to use a 9 mm non-rotating suprex carbon operating at 80 to 85 amperes with a problematical increase in light output.

The second type consists of the 16-inch reflector lamp using a 9 mm rotating carbon operating at 85 to 90 amperes, capable of delivering approximately 20,000 lumens. This lamp can be converted to use 11 mm carbons operating at 110 amperes, and can then deliver about 22,000 lumens.

The third consists of the condenser type

ROYAL SOUND MASTER

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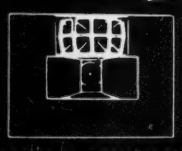
OF QUALITY SOUND AND PROJECTION EQUIPMENT
for indoor and outdoor theatres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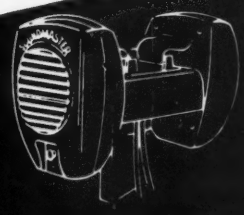
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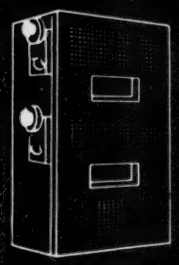
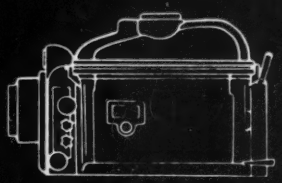
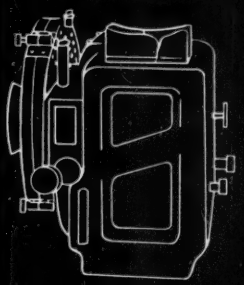

AMPLIFIERS

SOUNDHEADS


PROJECTION ARC LAMPS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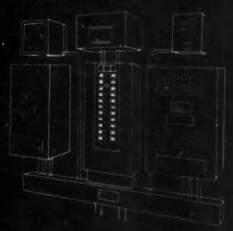
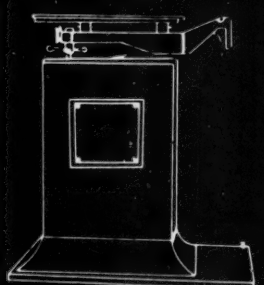

DRIVE-IN THEATRE AMPLIFICATION SYSTEMS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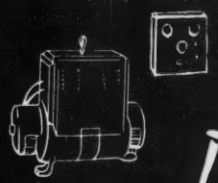
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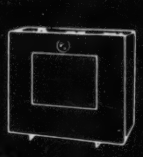
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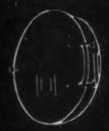
MAGAZINES

INDOOR THEATRES

Theatre owners the world over recognize Ballantyne leadership in the sound projection equipment field. There is no equipment comparable in quality at such a low cost. Royal Soundmaster Two-Way Horn Systems, Amplifiers, Soundheads, Projectors, and Arc Lamps will provide your theatre with the finest in sound and light reproduction... faithful, life-like, trouble-free. No matter what the seating capacity, size or shape of your theatre, Royal Soundmaster equipment will offer you outstanding performance at low cost.

OUTDOOR THEATRES

Ballantyne achievements in the drive-in theatre field are unsurpassed. Superior quality equipment, priced within the reach of everyone, has brought Ballantyne to its dominant place in the industry. Complete equipment for any size drive-in, down to the smallest booth accessory, is available at a cost far less than anything comparable in quality.

BALLANTYNE DRIVE-IN EQUIPMENT PACKAGE

Ballantyne drive-in equipment is available in a complete "package" . . . package-priced to save you money. Your choice of any combination of Soundmaster in-a-car speakers, amplification system, soundheads, projectors, arc lamps, bases, directional signs and booth accessories can be purchased at a substantial savings.

Before you buy any equipment see and compare Ballantyne!

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1707 Davenport Street
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Write for complete catalogs on either indoor or outdoor theatre equipment.

lamp using special f/z.0 quartz condensers, and 13.6 mm super-high intensity carbons operating at 175 to 180 amperes capable of delivering approximately 22,000 lumens.

The accompanying chart shows a series of curves which indicate the maximum possible incident light that can be obtained at the center of screens of large widths, using lamp optics, projector shutters and lenses that have the greatest available amount of transmissivity. In drawing these curves it was assumed that the lamp optics are f/2.0 or better, that the projector shutter combinations have a minimum of 55% transmission, that the projection lenses are f/2.0 or better, and that no heat filters, no draft glasses and no porthole glasses are used.

The vertical axis indicates foot-candle readings that will be obtained at the center of the screen; and the horizontal axis indicates the width of the screens in feet. *Curve A* represents the family of 8 mm positive carbon and 14-inch reflector suprex lamps. It will be seen that with these systems a center reading of 6 foot-candles can be obtained for a picture 46 feet wide, 10 foot-candles for a picture 36 feet wide, and approximately 15 foot-candles for a picture 30 feet wide.

Curve B represents 16-inch reflector type lamps using rotating 9 mm carbons, and it shows that center readings of 6 foot-candles will be obtained for images 55 feet wide, 10 foot-candles for those 43 feet wide, and 15 foot-candles for 35 feet.

Curve C represents the condenser type lamp using 13.6 mm carbons at 175 amperes. It also represents the 16-inch reflector lamp using 11 mm rotating carbons at 110 to 115 amperes. With either of these systems a center reading of 6 foot-candles should be obtained for a picture 60 feet wide, 10 foot-candles for one 46 feet wide, and 15 foot-candles for one 37 feet wide.

Curve D (dotted) is a *theoretical* curve representing the possible output of experimental 10 mm rotating carbons when used in a 16-inch reflector lamp. With this system it should be possible to obtain center readings of 6 foot-candles for a picture screen 65 feet wide, 10 foot-candles for one 51 feet wide, and 15 foot-candles for one 42 feet wide.

It is worthwhile repeating here that these values of light are the *maximum obtainable* since no filters of any sort have been considered, and it is assumed that every part of the projection system is functioning at maximum efficiency. In order to prevent film buckling under such conditions, it would probably be necessary to resort to air blast cooling of the film at the aperture in almost all of these cases.

SCREEN BRIGHTNESS

In order to ensure a sufficient screen brightness for proper viewing conditions, the American Standards Association (on SMPTE recommendations) has specified that the brightness in the center of a screen for a standard theatre should not be less than 9 foot-lamberts.

If we assume screen reflectivity of 90%, then the equivalent incident light should not be less than 10 foot-candles in the center of the screen. The chart has a horizontal line drawn at the 10 foot-candle position, intercepting all four curves. It may be seen that using the best of present equipment, the maximum picture width should not exceed 46 feet in order to stay within the "standard" limit. If the 10 mm carbon is developed into a usable trim, then the picture could be increased to a width of 50 feet.

POWER CONSTANCY

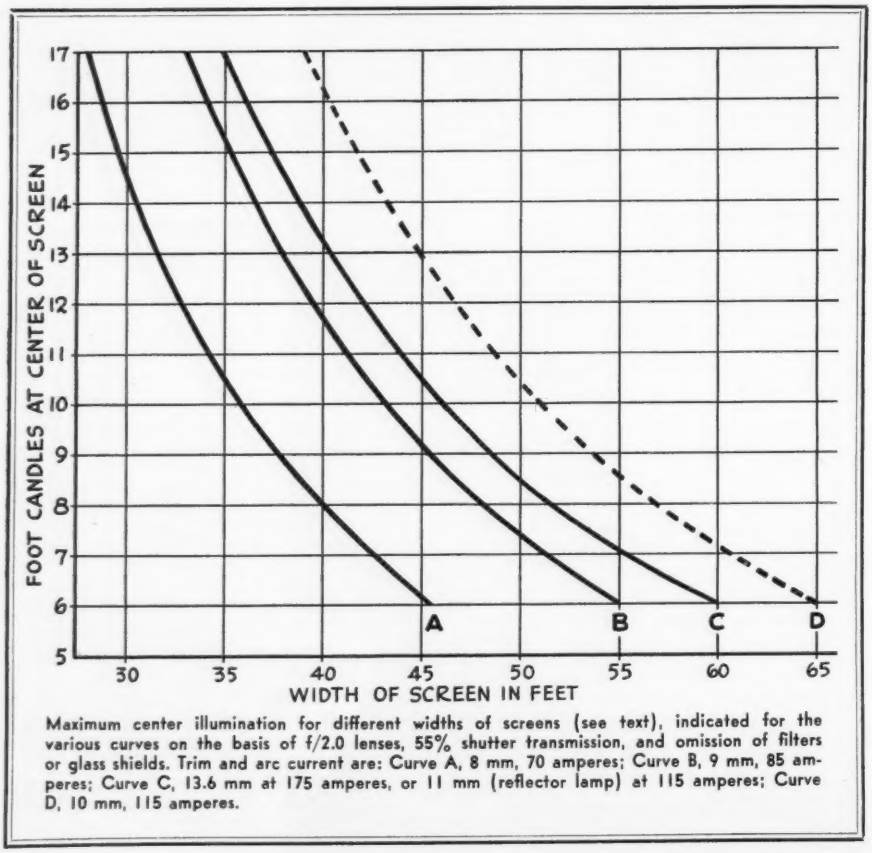
Due to the somewhat rural location of the drive-in theatre, it is rather important to impress upon the electrical utilities supplying light and power about the need for ample current capacity and for good voltage regulation. These conditions are necessary, especially with rectifiers.

In fact, it would be a good idea to insist that arc rectifiers have variable tapped switches and a.c. voltmeters so that input voltages can be maintained at a selected constant value.

AUDIO POWER

The power generally allowed per in-car speaker is about a quarter of a watt, and for a 1000-car drive-in the amplifiers supplying the speakers must have an audio power rating of at least 250 watts. This compares with 50 watts for the same number of persons in an enclosed theatre.

—Gio Gagliardi.



Maximum center illumination for different widths of screens (see text), indicated for the various curves on the basis of f/2.0 lenses, 55% shutter transmission, and omission of filters or glass shields. Trim and arc current are: Curve A, 8 mm, 70 amperes; Curve B, 9 mm, 85 amperes; Curve C, 13.6 mm at 175 amperes, or 11 mm (reflector lamp) at 115 amperes; Curve D, 10 mm, 115 amperes.

Screen Tower Soil And Foundation Factors

In constructing a foundation for a self-supporting screen tower, "concrete placed far out from the center of gravity of the tower has many times the value of the same amount placed near the center. . . . The number of cubic yards of concrete used in a foundation is not a measure of the tower's overall stability. Far more important is the location of the concrete," according to John Selby, Toledo engineer.

Soil compression is an important factor. Mr. Selby recommends observation of soil conditions during grading operations by someone able to judge its reaction under pressure. Permissible pressures on various kinds of soil, according to Mr. Selby, are as follows in pounds per square foot:

Bedrock, 20,000; *stiff gravel,* 6,000; *hard dry clay,* 4,000; *soft wet clay,* 3,000; *soft wet sand,* 3,000; *quicksand,* 1,000; *wet muck,* 500.

UMI

For Motion Picture Projection, National Carbon announces:

The brightest, whitest arc in the world—

"HITEX"

Projector Carbons!

FOR CONDENSER TYPE LAMPS

"NATIONAL" "HITEX" Super High Intensity projector carbons are brand new, another milestone in the development of projection light sources. They are considerably brighter than any other High Intensity projector carbon you can buy. They are much better in color balance. They last longer. They cost less to operate.

If your theatre operates with condenser type High Intensity lamps, investigate the new "National" "Hitex" projector carbons. We believe you will want to use them to get the ultimate in screen lighting.

FOR COMPLETE INFORMATION, WRITE TO NATIONAL CARBON DIVISION, UNION CARBIDE AND CARBON CORPORATION, DEPT. BT.

The terms "Hitex" and "National" are trade-marks of

NATIONAL CARBON DIVISION
UNION CARBIDE AND CARBON CORPORATION

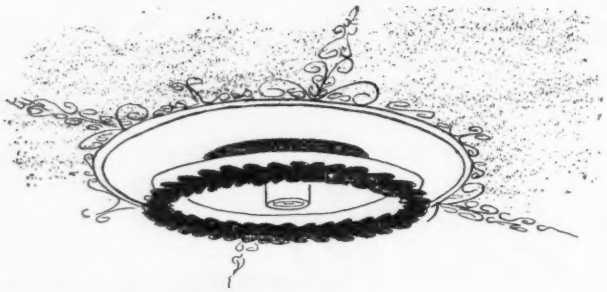
30 East 42nd Street, New York, 17, N. Y.

District Sales Offices:
Atlanta, Chicago, Dallas, Kansas City, New York, Pittsburgh, San Francisco

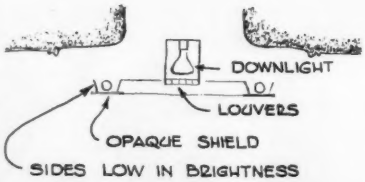
UMI

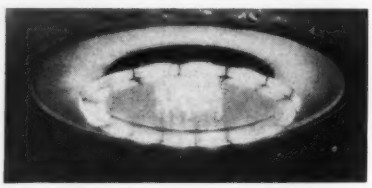
MODERNIZATION OF LIGHT SOURCES

A group of relatively simple ideas for the remodeling of theatre interior lighting installations, prepared by R. T. DORSEY, illuminating engineer of the Nela Park Lamp Department of the General Electric Company. Types of light sources typical of early theatres are indicated in photographs, and how each might be effectively modernized, with respect to both appearance and efficiency, is indicated in sketch, diagram and text.

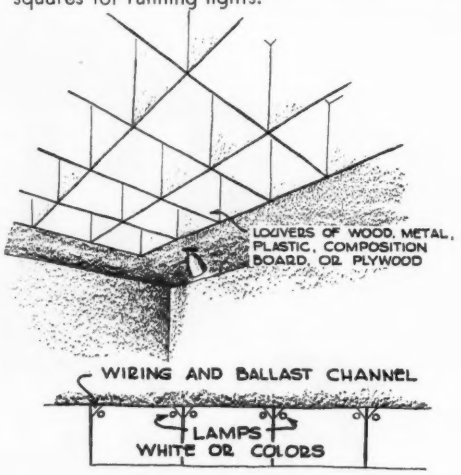


AUDITORIUM BRIGHTNESS: When auditorium fixtures are too bright, the tendency is to dim them to a comfortable value despite the fact that there may be practically no light in the seating area. Therefore the problem becomes one of designing for lower fixture brightness in relation to the amount of light it emits. Here the bottom of the glass ring has been covered with a dark shield, and the side made less bright by spraying the glass panels or replacing them with glass of lower transmission. The crystal chandelier in the center is replaced by an efficient, well louvered downlight to provide most of the necessary illumination, thereby allowing the outer ring to serve primarily as a decorative element.

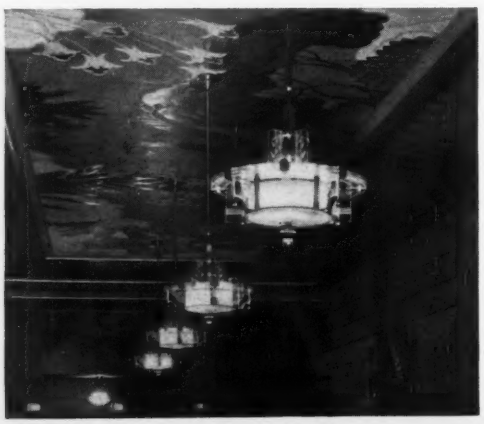


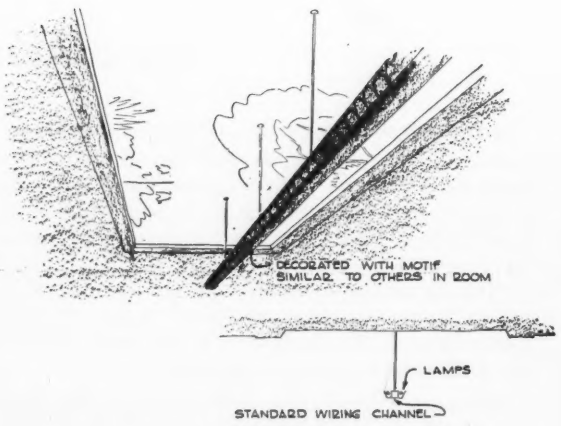


CEILING LOUVERS: An infinite variety of decorative possibilities and flexibility for seasonal effects can be achieved by patterns of louvers or shields applied to the ceiling. Directional effects can be created by painting one side of the shields different from the other. The scheme shown in the sketch might be used in the lobby. In the auditorium this would be modified to provide greater shielding, and downlights could be recessed in the squares for running lights.



ELIMINATING LOBBY GLARE: A straight forward, simple substitution for the over-bright, glaring fixtures in this lobby is offered by using standard channels and lamps with custom made shields. Such a lighting element can be more appropriate architecturally, provides softer, more pleasant illumination, and can emphasize important parts of the decorative scheme. This method can also be applied in the auditorium.





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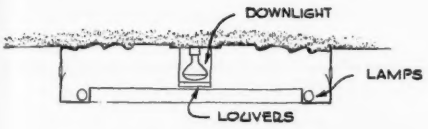
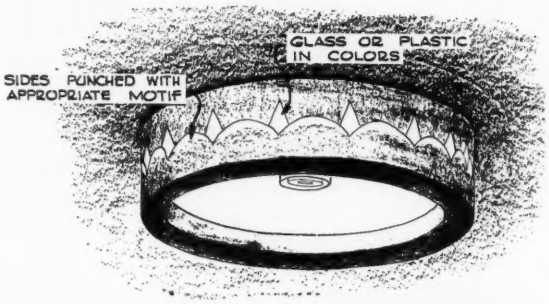
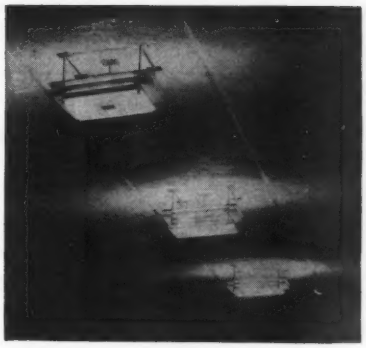
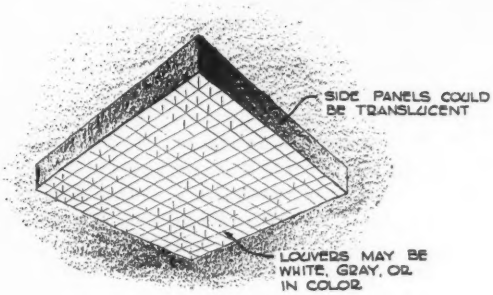
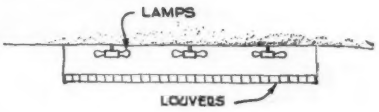




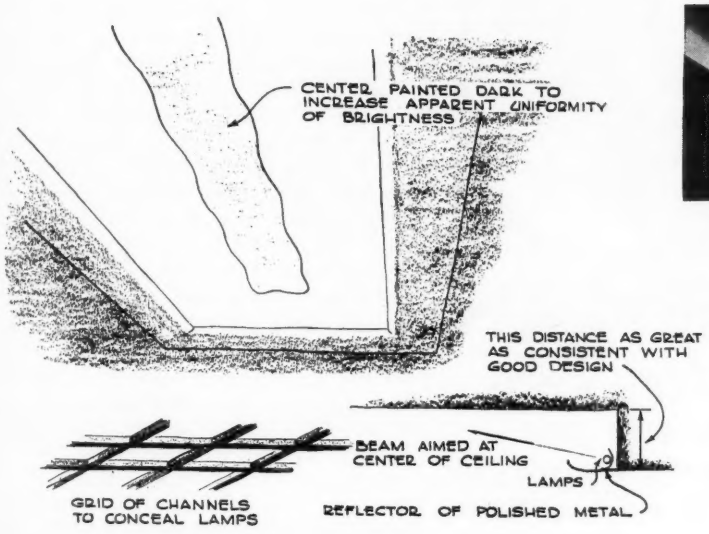
CEILING UNITS: Units such as these are commercially available from several manufacturers. Distinctive effects may be imparted by treatment of louvers, side shields, and color of lamps.

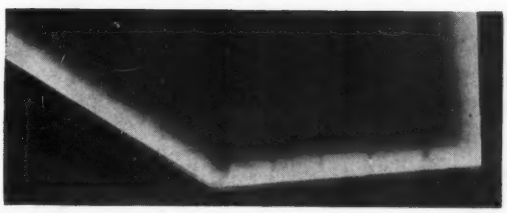






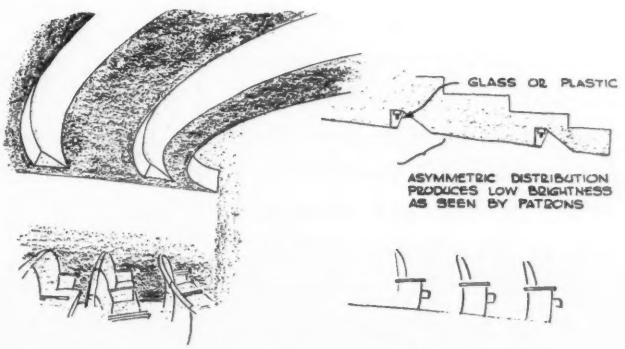
BALCONY SOFFIT: Bright side panels of fixtures under the balcony either detract from the picture or must be dimmed out, leaving little light for patrons to be seated with safety. The drum-shaped shield suggested here can be kept light in appearance with the decorative motif which allows a little light to spill out of the punched openings. The downlight is shielded carefully with louvers to allow adequate illumination without distracting brightnesses.


CENTER PAINTED DARK TO INCREASE APPARENT UNIFORMITY OF BRIGHTNESS
THIS DISTANCE AS GREAT AS CONSISTENT WITH GOOD DESIGN
BEAM AIMED AT CENTER OF CEILING
LAMPS
GRID OF CHANNELS TO CONCEAL LAMPS
REFLECTOR OF POLISHED METAL



IMPROVING COVE ILLUMINATION: Uniformity of brightness over this cove-lighted panel can be increased by using reflectors behind the fluorescent lamps to direct light out across the panel. Reversing the painting scheme in the photograph—dark colors in the center, light ones at the sides—will increase illumination somewhat. Another possibility is the addition of a suspended grid of channels with lamps inside. Variations of this may include different patterns. Small decorative lamps exposed on the bottom of the channels, and luminous sides or bottoms, are some of the possibilities. . . . Wherever indirect light is used, flat, or nearly flat, paint is desirable to reduce reflections on the ceiling.

UNDER-BALCONY CONTROL: Coves, coffers, wall brackets and other lighting elements under the balcony can be designed to produce adequate illumination without glare by making the part seated patrons see low in brightness.



POSTER SPOTTING: Wall lighting finds application in all areas. At left efficient reflectors are used with filament lamps in the lobby to emphasize poster panels. In the auditorium, walls similarly toned in low brightness create a cheerful effect, prevent uncomfortable screen contrast.

UMI

The Small Town Manager

A THEATRE manager in a small town has to work with a relatively small budget for advertising, supplies, maintenance, etc. On the other hand, he often can employ advertising and exploitation methods that usually are not feasible in a good-sized city.

A small manager also has special requirements of personal popularity. A big city manager seldom, if ever, stands in the lobby of the theatre to greet his patrons (unless it be an outlying neighborhood house), whereas the small town manager not only greets his patrons regularly every evening, but greets them by name and frequently stops to chat with them about local conditions and news of the community.

He sets out to be as popular as he can make himself by becoming, *without* appearing aggressive, one of the community. He accepts the limitations of his advertising budget and begins to find out how he can use the money he does have to best advantage.

He must not appear aggressive. That is important in the typical small town. By this we mean that he must not seem to be trying to "take over"—to impose his personality on others. Small town folk like a genuinely clever fellow as well as city people do; but in a small town *be sure you really are as clever as you would have people believe you are!* Even then, you can afford to be modest about it; they'll find it out in their own good time, and they'll enjoy, rather than resent, the discovery.

If he comports himself with modest confidence and a sincere feeling of good-will toward his new fellow-citizens, he will be invited, before long, to join an organization—probably the local Chamber of Commerce, or the Kiwanis Club. If the invitation doesn't come in good time without his seeking it, no harm will be done if he indicates a wish to join to some person who does belong with whom he has struck up a relatively close friendship.

It is important that he do join such organizations, and any others through which he can display an interest in community affairs, social as well as civic ones. And probably in most of the smaller towns, it would be constructive for the manager to go regularly to church if the place has one of his faith or of sympathetic belief.

ORGANIZATION INTERESTS

A small town theatre business can be easily imposed upon, especially for purposes of raising money. The manager has a better chance of reducing the number of such occasions, or of warding off such requests without affronting anyone, when he can talk to such committees as a friend or as one known to be sympathetic to such affairs.

One way in which he can make his business of special use to organizations in their fund-raising activities is to help stage school and church plays and similar entertainments. Quite likely he hasn't much talent as an actor or stage director, but he is a theatre man, and people will be inclined to think that he ought to know something about putting on a show. Entertainments of that kind are usually given in school auditoriums, parish and lodge halls, etc. Each is just one occasion less that the receipts of the theatre may be asked for.

There are situations, however, in which the facilities of the theatre can be offered without reducing income—as a meeting place of clubs and religious groups.

BUSINESS CO-OPERATION

Stretching the advertising dollar is definitely a good-will proposition in a small town. Passes cannot be distributed with the liberality that a city theatre may well be able to stand. The small town manager has to get *most* of his display and newspaper space absolutely for free if he is to get very much at all.

On the other hand, he has a bigger field for friendships of the kind that can be of material service to him.

The edictor of the local newspaper is very much a fellow to know as intimately as possible. How can you show him that you not only like him, but can be of serv-

THE EMPLOYER'S BEST FRIEND—

The mat that cuts breakage costs, prevents accidents, promotes sanitation, saves money.

AMERICAN Counter-Tred

IDEAL FOR USE behind candy counters and popcorn machines and in lavatories.

Non-slip surface. Resiliency reduces fatigue. Exceptionally tough and long wearing under heaviest traffic. Made of cotton cord bound together with rubber compounds. Ridged bottom affords aeration and drainage. Rolls up for mopping of floor. 3/8" thick. 2 feet wide; any length in one-foot sections vulcanized together.

AMERICAN MAT CORPORATION
1722 Adams Street, Toledo 2, Ohio

☐ Please send free folder, "A Mat for Every Purpose."
☐ Please send prices on American Counter-Tred Matting.
☐ Please send information and prices on Ezy-Rug Matting; ☐ Traffic-Tred Matting; ☐ Do-All All-Purpose Rubber and Cord Matting; ☐ Ever-Tred Vinyl Plastic Link Matting.

NAME .....
THEATRE .....
STREET .....
CITY & STATE .....

IN CANADA
OFFICES: American Mat Corporation, Ltd. Canada Trust Building Windsor, Ontario
FACTORY: West Lorne, Ontario

ice to him? Find a way to be of service.

The theatre buys advertising space in local papers, of course. That entitles it to a certain amount of free editorial space. And if the town is pretty small, the manager will also have working for him the fact that his editor friend isn't always too well supplied with local copy with which to fill his editorial columns. Breaks in news columns, and publicity "plants" from press books or in the form of original material, are vital to the effort to stretch the small town theatre advertising dollar.

The police department is another good contact to cultivate. This will require some family passes now and then, but in the smaller towns, where the whole police force doesn't amount to more than a few individuals, personal relations with the men count quite as much as free admissions when the manager wants to bill light posts and string banners across a street.

Business places supply some of the best locations for advertising matter. But the manager shouldn't overdo on this—he may outwear his welcome.

WORKING WITH THE SCHOOL

Quite different co-operation is that which may be available occasionally from the school principal. From time to time the theatre is likely to have booked a feature picture which is of substantial educational significance—perhaps in its moral angle, but more probably in its historical or scientific content. In that case, the school principal may not object to the posting of a notice, if not an actual advertising card, on the school bulletin board. There have been instances, in fact, in which a poster was allowed in a history classroom.

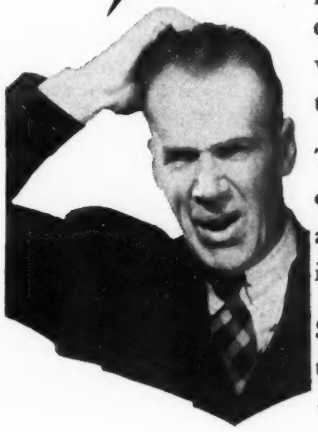
This idea might be carried still further by pointing out to the principal the possibility of having the proper history class give special attention to the period or events with which the picture deals at about the time it is to appear at the theatre, thus using the ability of a motion picture to make the facts of such study more easily understood and remembered.

Some public school teachers take a narrow view of the movies, so efforts to get their co-operation may run up against some pretty stiff prejudice. All the more reason for the effort, for in at least the smaller communities, the teachers are definitely among the people of influence. Maybe they haven't had the educational value of movies properly pointed out to them! A situation of this kind takes diplomacy and appreciation of the material in product, but there could hardly be a better chance for long-run constructive salesmanship.

The manager should do whatever he can to express the interest of his business in the work of the schools. One way is to offer an appropriate number of passes (call them "guest tickets") for distribution by the

I'd like to know

WHY CLEANING COSTS SO MUCH!



Itemized, the cost is mostly time and partly supplies and maintenance of equipment. Provide your workers with vacuum machines that are fast and easy to handle and see what happens.

That's the Spencer idea. Fast, easy strokes, quick disposal of dirt and built-in endurance combine to give better, faster cleaning at much lower costs.

See for yourself. Ask for a demonstration of the exact size machine you need (½ to 1 HP) and the vacuum tools and attachments that will eliminate a large part of the working time. Wet cleaning with vacuum, for instance, may pay for a Spencer in a few weeks.

Ask for a Demonstration

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD VACUUM CLEANING

411-A

I'D LIKE TO KNOW!

- ☐ HOW LARGE A MACHINE I NEED.
- ☐ HOW MUCH A SPENCER PORTABLE WOULD SAVE.
- ☐ HOW MUCH IT WOULD COST.
- ☐ PLEASE SEND BULLETIN TO:

Name_____

Company_____

Address_____

Convenient post cards for inquiring about products are supplied on page 77.

Bring Back The Missing Tenth to Your Theatre

THE MISSING TENTH is that segment of your potential patronage that does not now come to your theatre. It comprises the thousands of hearing aid users and the many more thousands who do not use hearing aids yet have difficulty in hearing and enjoying your programs.

THE TELESONIC SYSTEM will fill these vacant seats for you—and pay its moderate cost of installation over and over again.

Let us send you full details—Theatre owners' opinions—specifications.

Charles H. Lehman, *President*

TELESONIC THEATREPHONE CORPORATION

3 EAST 48th STREET, NEW YORK 17, N. Y. MU 8-2670-1

school authorities every month (or at least every examination period) to those pupils having the best ratings, allowing the educators to decide what kind of merit to award them for.

TWO GOOD PRACTICES

(1) The welcoming of new inhabitants to a small town should not be overlooked. A friendly form letter may well be sent to them with two "guest tickets" as a form of introduction to the management.

(2) A manager must be discreet in making local purchases. Naturally he should purchase everything locally that he possibly can, not only for his personal use, but also for the theatre. He should divide the trade among the merchants so far as he can.

—Charles H. Ryan.

•

PROJECTION

Whereas in city operations there are generally two-man booths, besides a general maintenance man and a full house staff, including manager, assistants, chiefs of service, etc., the average small town theatre must be pretty self-sufficient, with a small staff, usually including a manager, projectionists, cashier and possibly, a hired doorman. This, in some cases, also means a one-man booth, and the manager must of necessity be a jack-of-all-trades. It is absolutely necessary that he *co-operate* with his projectionists at all times to insure the proper presentation of his show.

First of all, he must have an adequate signal system from the floor to the booth. A buzzer system is generally used, as small community theatres cannot afford to install intercommunicating telephones.

Secondly, he must be on the floor during the operating hours, and with the use of his buzzer, keep his projectionist fully advised as to conditions, not only on the floor, but on the screen.

Thirdly, he must *know what* to look for in screen and sound results, and how to recognize it, instantly—this last is perhaps the most important of all.

The successful presentation of a picture on small town screens entails far more alertness on the part of the projectionist than is usually recognized. The rural theatre will invariably have from three to seven changes per week.

SHOW TIMING AND PRINTS

This means that film from all sources must be utilized to keep a steady flow of product, and it means further that the condition of the prints is not always the best. Inspection of prints becomes doubly important and is an essential in the routine of the projectionist.

Mounting and timing of shows is relatively difficult under these conditions because features sometimes will run 5 or 6 minutes short of their listed running time. Four, five and sometimes six trailers are usually included in the show. Rural audiences also are particularly partial to their 7 o'clock or 9 o'clock show, and the manager must be on the job *with the projectionist* after the arrival of each show so that proper time schedules can be set up.

The manager must be able to recognize a good or bad print so that he can capably keep his home office advised. Many a theatre has been improperly blamed for print damage due to the failure of the manager to report properly the correct condition upon arrival.

The manager should also know his screen and his sound system so that he can, during the running of his show, keep his projectionist alerted to any picture or sound distortion. His signaling through his buzzer system must be adequate so that the projectionist will know immediately whether he is out-of-frame, his light poor, or his sound too low or too loud.

In spite of all necessary precautions, however, trouble can and will sometimes happen. Again the buzzer system is important between manager and projectionist for invariably, if the trouble is not remedied immediately, the manager will hot-foot it to the booth. *This is about the worst method of procedure.* If the projectionist needs help, he can signal for it; otherwise, the manager should remain on the floor. Unless the manager is a trained projectionist, he will probably be of no help, anyway, and it is far more important that he be on the floor.

WHEN A BREAK OCCURS

One of the commonest practices is for the projectionist to throw on the house lights the minute the screen goes dark. This is an invitation to create confusion. *House lights should be turned on only at a signal from the manager.* If the audience is not unruly and is taking the "break" good-naturedly, there is no reason to turn on house lights. By turning them on, he is inviting his audience to leave their seats for a drink of water or a trip to the lounge for a smoke, etc. Then when the lights are cut, patrons who have left their seats are in a state of confusion, not remembering just where they were seated and probably having left some article of wearing apparel behind. Children are the greatest source of disturbance in a case of this kind and occasionally serious accidents have resulted.

If the trouble cannot be rectified within a few minutes, and the projectionist, having located the source, can determine that it will take a fairly definite amount of time —say, five or ten minutes—to correct it, then and only then should the house lights be turned on, with the manager informing

WHAT MAKES
popsit plus
America's Largest
Selling Popcorn Oil
IN WINTER WEATHER—IT POURS!
No Fuss—No Mess
POPSIT PLUS is always liquid at indoor temperatures . . . no pre-heating, no scooping, no splattering . . . just pour into the measuring cup and pop the sellin'est corn you've ever tasted!
popsit plus!
LIQUID
POPCORN
POPPING
OIL
Simonin of Philadelphia
POPPING OIL SPECIALISTS TO THE NATION

his audience of the brief intermission and its expected duration.

CHECKING HOUSE FACTORS

The rural or small town theatre manager should also be capable of dealing with certain house matters related to good projection. He should be able to arrange his auditorium lighting so that no annoying reflections will bother his patrons. Side-wall lighting is usually the particular source of annoyance and extreme care should be exercised in the wattage and color used in side-wall fixtures.

Screen masking is another important detail to be assured of a clear picture. An overlap of 2 inches will generally give a clear picture, but masking should be checked regularly for fraying.

The theatre should be thoroughly checked for any "dead spots" in the sound. Very frequently so-called "dead spots" can be corrected with a slight change in the directional pitch of the sound horns.

Keeping the screen itself clean is a problem that perplexes many a manager, and yet a good clean screen is one of the first requisites for a clear picture. Screen "dust" can be greatly curtailed if the manager will exercise care in the cleaning of his theatre. Rural audiences are great "nibblers." Regardless of what the management sells in the lobby, they will bring in countless edible articles. *Sweeping before vacuuming is therefore essential.*

In most theatres the traveler, or screen curtain, will be closed during this process *but the wise manager will close his front curtain as well.* By so doing, a minimum of dust will reach the screen.

As for cleaning the screen itself, a very soft brush on the end of a long vacuum cleaning tube will generally suffice to remove light dust particles, but the cleaning process *must be done lightly and gently to prevent smearing.*

—GEORGE F. MILLER.

MAINTENANCE OF HUNG CEILINGS

When properly mixed and applied over a substantial base, plaster should last a long time. Defects do appear, however, and they should be given immediate care, not only to prevent the trouble from spreading, but in the case of ceilings, to protect patrons from injury.

Stains can be caused by leaks through the roof, or rust penetrating through the plaster from the lath or steel members.

Crust and stains appearing on the finish can be the result of too much lime in the water mixed with the mortar, or wet lath.

Lime stains can be remedied by scraping off all loose scale and plaster, then applying a moisture proofing solution.

When this application is dry, the surface should be lightly sponged with clean water, then left to dry again, after which linseed oil should be applied. After such treatment, fresh plaster can be applied where needed.

In some cases, alkaline stains will appear on the surface of the plaster. These areas should be washed with a strong solution of zinc-sulphate (applied by only a skillful artisan in this craft).

STRUCTURE MAINTENANCE

In the care of the steel structure in a hung ceiling, a periodic checkup should be made for weakness or repairs.

Any rust spots and scale should be removed by using a stiff-wire brush; if thick, with a hammer and chisel.

Also, every bolt and nut should be tested with a heavy wrench for holding strength.

Any leakage of water through the roof should be remedied at once to prevent rust forming on bolt threads, trusses, struts, etc.

In the painting of steel members of a hung ceiling, only a good grade of paint prepared especially for steel work should be used. The paint should be tough and elastic with good adhesion properties, and to a large degree water-proof.

—JOHN J. SEFING.

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Exploiting a New Theatre Opening

AS MANY people as possible should know that a theatre is going to open. All promotion should be aimed at making the public "theatre conscious," at whetting the public appetite for a new showplace.

A series of small ads *frequently* in local newspapers will bring more results than one big ad. This series tells over a period of several weeks of the coming opening. One week or a few days before the opening is soon enough for the big ads.

The newspapers should be supplied plenty of publicity for their news columns. The publicity should be written so that it can be inserted as space conditions permit, except for those which necessarily have a "spot news angle"—that is, a timely element requiring immediate use.

CO-OPERATIVE AD

A co-operative supplement of one of the local newspapers, on the day before the opening (or the issue before opening when the paper is a weekly) is a well established method of creating an opening ballyhoo, and it should be contrived whenever possible. Supply the paper's advertising manager with a list of the contractors, suppliers, etc., and promise him all assistance possible in persuading them to take advertising space.

The theatre itself, of course, takes large space—a full page if the co-operative advertising requires more than a page; otherwise, the theatre takes relatively large space on a page, and the smaller co-operative ads are grouped around it. The remainder of the supplement should be devoted to a lead story on the theatre and its management in general, with a number of shorter stories on various features and personalities associated with it, plus two or three pictures of the theatre and persons connected with the project.

PREVIEW OF THEATRE

Archie J. Laurie of Canada's Odeon Theatres, has found "previews" of the theatre by local organizations effective in exploiting theatre openings, stating:

"An important fundamental disclosed by

Sweet Music FOR THEATRE OWNERS

MAINTENANCE COSTS GREATLY REDUCED!

1 UNIT—2 USES
TORNADO*
AIR SWEEPER and PAC-VAC

Cleans Auditoriums quickly without effort . . . without stooping. Air Sweeper blows all popcorn boxes, candy wrappers, mud, grit and trash from under seats and between aisles for easy removal. Leaves auditorium absolutely clean.

Pac-Vac cleans Upholstery, Stairways, Lobby and similar places quickly and easily. Light in weight yet simple to operate. Effective and versatile. May be easily converted into a powerful insecticide or deodorant sprayer. Shoots a fine mist up to a distance of 50 feet which penetrates into every crack and opening.

Bulletin 584 contains complete information . . . Ask for it.

*Trade Mark Reg. U. S. Pat. Off.

BREUER ELECTRIC MFG. CO.
Manufacturers of Heavy Duty Commercial Vacuum Cleaners and All-Purpose Floor Machines
5102 Ravenswood Ave. Chicago 40, Illinois

these personal tours has been the discovery that, in this modern age, theatregoers are particularly interested in the various technical phases of theatre building and operation. This applies not only to engineering developments, such as heating and air-conditioning, but to such theatre aspects as film projection, acoustics, the effect of color on emotions, and various factors in wall treatment and decoration.

It was early discovered in the course of these individual exploitation campaigns that theatregoers are eagerly interested in such mechanics during inspection tours if the explanations are provided in non-technical but entertaining form easily understood by laymen."

That is an observation contrary to opinion that the theatre should remain a mystery.

WINDOW CARDS AND HANDBILLS

Local merchants should be contacted and persuaded, if possible, to display cards announcing the coming of the new theatre. If the drawing area is cosmopolitan rather than "exclusive," it may be well to place handbills in the mail boxes of the neighborhood.

The advertising should stress all the new innovations and features that the theatre is going to have, such things as the air-conditioning, the seating, the sound equipment, etc. Anything that suggests the "latest" facilities should be stressed.

OPENING DAY FANFARE

With the basic advertising program in motion, the management should contact civic leaders to help make the opening a community occasion. If the mayor can't be procured to preside at the opening, an effort should be made to get an alderman or other municipal officer to make an address or otherwise "officiate" at the inaugural performance.

For dressing up the lobby, foyer and lounges, baskets of flowers should be purchased. And the florist from whom they are bought ought to donate roses to be given to the first 200 ladies that enter the theatre on opening day. Give the florist a free plug in the opening day trailer, which might read:

Welcome to the new Bijou! We hope that you will make the Bijou your regular place of entertainment. The Management desires the suggestions and comments of patrons. We will do all that we can to afford you the best in motion pictures.

The beautiful roses given to the ladies on opening day were donated by the Duffy Floral Shop, 1250 Main Street.

STAFF ATTIRE AND INSTRUCTIONS

It is very important that the staff be properly attired and instructed in serving the public. The ushers, doormen and assistants should be resplendent in tasteful (not gaudy) uniforms, something well tailored and tastefully styled.

The manager and his assistant should wear a tuxedo for the opening unless the community is too unfamiliar with such attire.

It is essential that the staff members be able to answer questions pertaining to the new theatre. Instructions should be given the staff days before the opening so as to make all members familiar with the layout and the policy, and able to answer patrons' questions.

—CHARLES F. RYAN.

One SUPER Cleans Every-thing

- The Super Hi-up Tube adds 10 feet to the reach of the operator, making overhead and under floor areas easy to keep clean.
- The Super Floor tool slips under anything 3½ inches from the floor and goes right up to the wall leaving no strip of carpet for moths to destroy.
- The Super Spotlight attached to the handle throws a strong beam before the floor tool illuminating dark areas, saves houselights.
- The Super Screen brush made of special, long bristles dislodges dirt—keeps pictures bright and sound effects clear.
- The Super Blower Elbow provides the Super with a powerful air force which boosts all kinds of debris and refuse out from under seat areas and down front for easy disposal.

These are only a few of the special tools designed for theatre cleaner. Ask your dealer for a demonstration.

Because it is tool-equipped and engineered for the particular and involved job of cleaning the modern theatre, the Super Specialized Theatre Cleaner easily meets your most difficult cleaning requirements. Spring weather increases the cleaning task—mud and street filth is tracked in constantly. Only thorough, frequent cleaning will save costly furnishings and floor coverings from damage. Keep the house bright and pleasing to patrons. The Super with its amazing tools, easy portability and powerful pick-up enables you to keep your theatre really clean under all conditions with a minimum of labor and expense.

NATIONAL SUPER SERVICE COMPANY, INC., 1941 N. 13th St., Toledo 2, Ohio
NATIONAL SUPER SERVICE COMPANY OF CANADA, Toronto, Ont.; Vancouver, B. C.

USHERING:

1. Supervision—

THE MANAGER'S personality is reflected in those who are employed by him to meet the public; therefore, since our business is more or less founded on personality, it is only reasonable to believe that people seeking entertainment will be drawn to the theatre with pleasant staff personality—staff-appeal, if you will—radiating from cashier, from doorman, from ushers.

The entire staff of a theatre should be brought into meetings at regular intervals, preferably once a week.

It is of the utmost importance that an usher feel the importance of his job. He must remember that a surly reply or a show of unconcern will be remembered.

Character is the foundation of all service, and it should be an objective in staff training to bring out and develop the qualities of good, sound character, and to exploit them in such a manner as to bring credit to the theatre.

Courtesy in an organization is an expression of two qualities—(a) *enthusiasm,* which arises from contentment and satisfaction in knowing that one is not only filling the requirements of the present position, but is training himself for greater possibilities; and (b) *efficiency,* which eliminates lost motion and confusing, irritating non-essentials.

USHER TRAINING

In training ushers, familiarize them with the physical layout of the theatre. They must know the locations of all fire extinguishers and the places of the fire hose stations.

Each day the ushers should be on the floor at least fifteen minutes before patrons are admitted. Their job at this time is to check the cleanliness of rest rooms and lobbies, orchestra and balcony. As each usher is assigned to his post, he should check each light bulb in his section. If one is out, it should be reported to the chief-of-service, or if none, directly to the management.

An usher should never be familiarly *personal* in his zeal to please the patrons, but he should give the impression that the management is interested in the well-being of each patron. Finding seats as near as possible to where the patron wishes to sit, a show of concern when a child loses a hat or a penny, or when an adult loses a purse or a shoe; to remember the patron whom he promised a better seat "later"—these big little things make for pleased patrons.

A patron should be treated with utmost courtesy and deference *invariably.*

When over-enthusiastic patrons make too much noise and annoy patrons around

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them, the usher should ask them to be quieter; but should they continue their noisemaking after more than one warning, the manager or his assistant should be called to take care of the matter.

Elderly or infirm people should be given special attention.

Because of natural modesty, many patrons searching for a rest room hesitate to ask its location. *Staff members should be on the look-out for such situations.* This is a fine point in courtesy and should be watched carefully by ushers and doormen.

•

2. To Ushers—

[*In the following, instruction is treated in topic and tone so as to provide text for a staff manual, should such material be needed for that purpose.*]

THEATRE OPERATION is not a subject you can learn merely by having somebody talk to you about it. It is a kind of work that requires a lot of time spent in *doing*.

You must do everything properly in line of duty that is requested of you—with patience, persistence, determination.

If you make up your mind that theatre operation is what you like, it will be a pleasure for you to work at it, and you then are almost bound to be a success.

BUILDING PATRONAGE

New customers are just as valuable as old customers; remember that each new customer is an old one now in the making. See that you do your part to make him want to come back with his family and his friends.

Even capacity hours present no occasion to shoo a patron along with, *"Seats in the next aisle only!"* The friendly advice, "I have only front seats here, but you can get more desirable ones in the next aisle," will take away the sting of command.

EMERGENCY EVACUATION

In case of fire certain members of the floor staff should go to certain posts and urge people to leave through the exits nearest them. Most people will insist upon leaving by the same door through which they entered the theatre. It is important to get the people to leave in an orderly manner.

Many managers instruct their ushers not to answer or to get into conversation with patrons on matters beyond their knowledge or authority; then an usher, in his endeavor to obey these instructions, sends the patron on a "Cook's tour" to find the chief usher or assistant or manager.

The polite and efficient way to handle such a situation is for the usher to excuse himself and ask the patron to wait while

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he goes to his superior *and brings him to the patron.*

USHER ETIQUETTE

When wishing to attract a guest's attention, never summon, but step up to the guest and say, *"I beg your pardon, sir."*

Assist guests in every possible way. Be especially courteous to ladies, children and elderly people. Crippled people should be extended every courtesy.

Never give guests any orders. Communicate your desires to them in the form of requests. Accompany the acceptance of your requests with, *"I thank you, sir."*

Consult

Poblocki

First

for the conventional theatre

Complete porcelain and stainless steel fronts

marquees . . . signs

box offices

poster cases, aluminum and stainless steel

easel poster cases

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for the drive-in theatre

21 models of name and attraction signs designed for every size of outdoor theatres

The SNACK-KAR, doubles refreshment profits

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If asked your opinion of the performance, answer, "The comments are very favorable, sir. I think you will enjoy it."

You must keep your hands off guests.

If you make the mistake of letting some guests into your aisle ahead of others who have been waiting longer and then later complain, answer: "I am very sorry, it was my mistake. I will be sure to give you the next seats available." Then be sure to do it. A broken promise is a very bad advertisement.

If you are directing a person to another aisle and he desires a seat in your aisle, never say, "Seats are available in aisle four, please," say instead, "I am sorry, sir, this aisle is filled at present; *you will find seats in aisle four."*

Use your flashlight to aid guests and *do not rush them,* for the change from the outside light of the darkened auditorium is very confusing. Be patient. Remember you are accustomed to the darkness and they are not.

Patrons wishing to find better seats down front should be assisted to do so with care not to annoy others.

If you are requested to ask another patron to move on so that you may be able to seat two or more persons together, reply, "I am very sorry, we do not make it a practice to ask guests to move—you may do so if you wish."

Be careful not to place yourself at any time so as to obstruct patrons' view of the screen longer than necessary.

Do not walk up or down foyer space unless it is absolutely necessary. Avoid any unnecessary confusion.

Do not shush anyone. If a patron is creating unnecessary noise say, "I beg your pardon, sir, you are annoying those around you," *then leave immediately.* If the patron persists in making noise, call the manager at once.

Mothers with crying children should be treated with the utmost courtesy and care. If the child continues to cry after you have spoken to the mother, say, "I am very sorry, ma'am, but I must ask you to take the little one to the rest room."

CHILDREN PROBLEMS

On Saturday and Sunday afternoons children commonly arrive at the theatre very early and leave comparatively late. They usually see more than one performance and are constantly wandering throughout the theatre, visiting the foyer and rest rooms. The utmost diplomacy should be used with children under these circumstances. They should never be dealt with harshly.

Children are the barometer of adult attendance in many cases. If the children like the show, they are certain to tell their parents about it, and very often the parents go to see the show on their children's recommendations.

Should the child be mistreated or mishandled, the parents are sure to hear about that, too, and the theatre will suffer in consequence.

When it is apparent that the child has been in the theatre too long, remind him of the lateness of the hour. If diplomacy is used with the child, it is usually a simple problem to get him to leave the theatre and still be satisfied with the treatment he has received.

ACCIDENTS

The accident problem in the theatre is an acute one which requires a great deal of common sense, tact and diplomacy. When a patron falls down stairs (the most common theatre accident) there are several things which can be done.

If hurt, but not so badly that he apparently should not be moved, he should be assisted to where first-aid can be administered. The spot where the accident took place should be examined immediately to determine if the accident was due to a fault in the carpeting, etc. (If it is seen that it is the fault of the theatre, the manager should call the insurance physician.)

Under no circumstances should an employe of the theatre take the injured patron home in his car. If an accident should occur to the automobile, the theatre would be responsible and liable. A relative, or on request of the patron, a taxi should be summoned to get the patron home.

When a patron falls but does not seem to be injured, nor does he want to make a complaint, an accident form should be made out nevertheless.

Whenever a member of the staff sees an accident (fall or tripping incident), he should report all the details to the manager, try to get a complete description of the accident, of the patron and of any friends with the patron. Then the theatre can send in a report to the insurance company. It is important to obtain any witnesses possible.

CONTROLLING CROWDS

The theatre public, especially in good-sized cities, is used to being controlled at times by means of ropes blocking off entrances and exits and aisles. The practice isn't too obnoxious if it is so applied that it does not have the effect of "herding." Everybody on the staff who is involved in it should be particularly cheerful at such times.

If people have to wait for seats very long, they are easily irritated, and the slightest look or gesture which suggests indifference to their discomfort can turn those ropes into a menace instead of a convenience to the theatre.

The staff should endeavor to create, on these occasions, a feeling of good-natured acceptance of an unhappy but only mo-

mentary condition—"we know it's tough and greatly regret it, but 'things are tough all over' and anyway you really won't have to wait very much longer now"—trying to produce that general attitude. It is an occasion for the staff to make pleasant remarks, with humor—"Only a few hours longer," etc., with a broad smile.

If a patron appears to be getting a bit out of control, a quiet, impersonal, "Please, stand inside the ropes, thank you," will usually suffice. Never speak crossly to a patron at any time is the rule, but it is doubly the rule with a crowd. The patron is angered more because you have *embarrassed* him than because you have been officious. Moreover, other patrons, hearing you, will take sides—not with you, but with their fellow patron!

—CHARLES H. RYAN.

THEATRE LAW DIGEST

Public Liability And Patron Relations

A LEGAL PHRASE that might well be included in the lingo of theatre operation is *res ipsa loquitor*. It refers to a rule of law that is applied commonly in liability cases. It is applicable when the court *infers* that an injury to a person legally on another's property was caused by negligence of the property owner. As one court put it (Hall v. Redifer, 79 N.E. [2d] 237):

"The doctrine of *res ipsa loquitor* does not require that there be an allegation by the plaintiff that the defendant had knowledge of the existence of the defect, or that it has an opportunity to gain such knowledge."

•

Negligence Must Be Proven

In Esposito v. G. O. K. Theatre Enterprises, Inc. (60 Atl. [2d] 287), a patron sued a theatre corporation for $5,000 for injuries alleged to have been suffered by her when she fell while descending a stairway leading to the ladies restroom. The legal counsel for the theatre corporation won this suit by convincing the jury that the stairway on which the patron fell was neither defective nor dangerous. The court said:

"We find there was no competent evidence to establish any improper construction of the stairway. Negligence is never presumed. It is a fact that must be shown."

Also, this court held that a theatre corporation is *not* liable in damages for an injury sustained by a patron on a defective floor, or step, if the patron *fails* to prove that the theatre manager *knew* that the floor or step was defective.

For comparison, see the new case of Newman v. Fox West Coast Theatres (194 Pac. [2d] 706). In this case an injured patron sued a theatre corporation for several thousand dollars damages for an injury she received when she slipped and fell on a wet floor in a toilet room. This patron *proved* that the theatre manager knew that the floor was wet, and that he neglected for more than an hour to have an employe mop the floor dry. In view of this testimony the higher court held the theatre corporation liable for the patron's injury.

This court said:

"There occurred on the premises a new condition involving greater risk of injury to a visiting patron, there also arose a new duty of theatre corporation to rectify that condition, or to warn such patron of that condition and the risk involved therein. This is so because appellant, through its manager, Brown, knew of the condition of the washroom before respondent (patron) was injured. Not only did Brown know of the condition of the washroom floor, but having dispatched the ill woman and her companion, he had ample time to mop up the water on the floor prior to respondent's injury."

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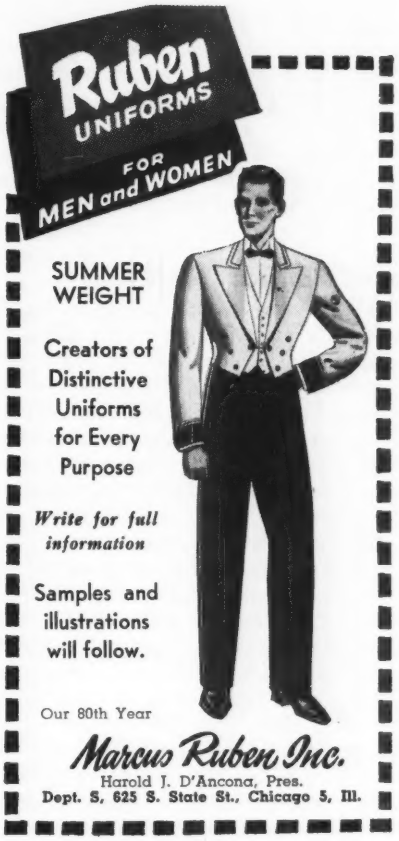
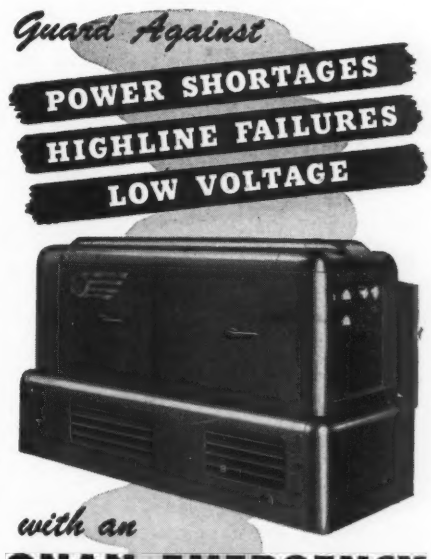
Value of Warning Signs

Theatre operators should either eliminate step-downs *or post large warning signs.* In Buck v. Miller Amusement Company, Inc. (200 Pac. [2d] 286), a woman patron had approached the restroom of a theatre, and as she opened the door, she fell. Testimony showed that *there was a drop or stepdown of 5 inches to a platform 3 feet square; and to the right of the platform was another step-down of about 5 inches to the level of the restroom floor.* A partition wall prevented forward progress of a patron entering the restroom, and she was required a turn to the right. *On this partition wall was a sign,* "Step Down," with an arrow pointing to the step. This sign was about 8 to 10 inches high. *There was no warning of any kind on the door.* In view of this testimony the jury held the theatre operator liable.

This verdict was reached not withstanding the testimony that a small warning sign was on the wall just before the stepdown was reached. But there was *no* warning sign *on the door* to the restroom. The higher court said:

"The plaintiff (patron) was a large woman and she might have stepped forward with her right foot and lost her balance before her body had fully entered the opening and before enough of the sign was dis-

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closed to warn her before her momentum carried her forward and down."

For comparison, see Downing v. 184 N.W. 722. This court said:

". . . We are not prepared to hold that a person is guilty of negligence in failing to look to the floor of the vestibule or corridor before crossing the threshold."

•

Avoid "Unusual" Conditions

Theatre owners and managers should frequently inspect theatre premises so as to *anticipate* accident, and in planning a theatre as well, *eliminate all things, structural and otherwise, that may cause injuries to patrons.* Look especially for *unusual* conditions—those that are not strictly in accordance with established principles of safe practice.

Sometimes, however, conditions that are ordinary enough in themselves, can become unexpected ones under certain circumstances. This was the situation in Legler v. Kennington-Saenger Theatres, Inc. (172 Fed. [2d] 982). A woman patron stood waiting with the crowd in the outer lobby for some time, then one of the ushers directed the crowd to move towards an entrance. She testified that the crowd was so large that she could not see the floor.

As she moved along with the crowd, she fell over a heavy sand urn and suffered painful injuries. Although considerable testimony was given by the theatre manager and others, that no person had ever fallen over one of the urns before, and that the urns were very noticeable, yet the higher court awarded damages, saying:

"Although theatre owners are not insurers of the safety of their patrons, they nevertheless owe them the duty of exercising reasonable care to maintain the premises in a safe condition, to warn them of hidden dangers, and to shield them from harm and injuries which, under the circumstances, might reasonably be anticipated. Here, the jury was warranted in finding defendant negligent in permitting the outer lobby of the theatre to become so densely crowded as to cut off a view of the urns and the floor. In view of the undisputed evidence as to the congested condition which obtained at the time of the injury, and notwithstanding her view was obstructed by the crowd, plaintiff (patron) had the right to assume that she could move in the crowd with safety."

•

Value of Competent Inspection

Usual circumstances and common hazards do not incur liability necessarily. For example, plaster that falls, injuring a patron, without the theatre owner or staff having done anything to cause it. (Rich v. Meadville Park Theatre, 62 Atl. [2d] 1). And a theatre owner is not liable for injuries caused by construction properly representing specifications drawn up by a competent architect (Adriani v. Wirth, 35 So. [2d] 254).

However, if a theatre owner gives a contract to a reputable contractor to perform alterations on the theatre, he is not relieved from injuries caused by negligence of the contractor. In Potter v. Empress Theatre Company, (204 Pac. [2d] 120), a higher court, in awarding $70,000 damages said:

"The duty to use ordinary care to maintain the marquee in a safe condition for pedestrians upon the public sidewalk was an affirmative duty. The evidence is ample to justify the implication of the jury's verdict that the theatre companies did not use ordinary care to maintain the marquee in a safe condition, and that they knew, or in the exercise of reasonable care should have known, that the support for the marquee had been impaired; yet they did nothing at any time to protect the structures which they had erected and were charged with maintaining."

This court also held that $70,000 damages was not excessive in view of the fact that the theatre corporation's management *failed to exercise ordinary care to inspect alteration work* being done by the construction company.

Regular, technically competent inspection is an excellent protection in two ways: (1) It may avoid an accident; and (2) it may prove absence of negligence. For example, in Skeen v. Stanley (66 Atl. [2d] 774), wherein a woman theatre patron was injured by a bolt which apparently had fallen from the ceiling. The lower court held the theatre company *not* liable on the assumption that the accident was caused by a defect "unseen, unknown and undiscoverable," but the higher court reversed this verdict, and said:

"The circumstance that a greasy bolt dropped from the ceiling of defendant's theatre is evidence from which negligence may be inferred. It is not reasonable to believe that the bolt fell out of the sky. A patron of a theatre is not charged with the responsibility of conducting an investigation of the theatre's ceiling before sitting under it and witnessing a performance. For the absolving of the defendant (theatre company) from legal resposibility for an injury caused by the fall of this bolt on one of its patrons, it is only fair to call upon the defendant (theatre company) to show that it exercised due care to prevent harm to its patrons."

This court explained further that *the theatre company might avoid liability if it showed that its maintenance man regularly inspected the theatre and the bolt was not discovered in its dangerous location.*

A review of the leading case of Bechtel v. Franklin (182 A. 800) clearly indicates the kind of testimony a theatre owner must introduce in such an instance. In this case the proprietor called an employe, who testified that he was in the building many times a day and never noticed anything wrong with the plaster. The manager testified he made an inspection of the ceiling and never saw any defects. The contractor who applied the plaster testified that the condition of the plaster when completed was first-class. In view of this testimony, the higher court refused to award damages to the injured patron.

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Manager's Liability for Injury

In 1949 a higher court held that a theatre manager may be held personally liable for negligence which results in injury to a patron. This was in Waters Theatre Corporation v. Anthony (40 So. [2d] 316.)

A woman patron who came into a motion picture theatre seriously injured her spine when the seat she undertook to occupy had no bottom, and she sat down on the floor. The injured patron sued both the theatre corporation and its manager for $20,000.

The higher court awarded the injured patron $15,000. This court ordered the theatre manager to pay her $7,500, and the theatre corporation to pay her $7,500. The court said:

"Lackey was the manager of the theatre. He owed a patron of the theatre a duty to exercise due care to have the seat used by her reasonably free from danger, and if he was negligent in this respect, proximately causing injury to her, he and his empolyer were jointly liable. . . . It was his duty to use reasonable care so as not to cause injury to third persons exercising their lawful rights as patrons of the theatre."

This court also explained that a theatre manager cannot avoid being personally liable for an injury to a patron by merely proving that he regularly inspected the theatre. His proof of care must go further and include proof of inspections also by others.

•

Firm's Liability for Manager's Acts

All higher courts agree that a theatre corporation is fully liable for damaging acts done by the manager within the scope of the employment. Hence, if a manager assaults a customer *while attending* to the theatre operator's business, *whether on or off the theatre premises*, his employer is liable for resultant damages.

In Clarke v. Americus (47 S. E. [2d] 909), it was shown that a company's manager had an argument with a patron and struck the patron in the mouth, causing severe injuries. The lower court refused to hold the company liable, stating that the manager was not acting within the scope of the employment when he assaulted the patron, because the latter had left the premises before he was assaulted. However, the higher court reversed the verdict, and said:

"Although he (patron) had completed the mission, Teaford (manager) resumed

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the business in a different aspect when he invited young Clarke (patron) back."

Of course, the theatre manager may be held also personally liable in damages to a patron whom he assaulted, whether or not he was acting within the scope of the employment when the assault was committed.

•

Right to Refuse Admission

A theatre operator is not liable in any state for refusing admission to a patron, if the exclusion was *not* because of race, creed or color. (*See Madden,* 72 N. E. [2d] 698.)

Current trends in political thought regarding discrimination because of race, creed or color, may emphasize the significance of a suit in which the court ruled that *the Federal Government is not constitutionally capable of legislating against such acts as refusing a person admission to a theatre merely because of his color. Such legislation is reserved to the states.*

In Henderson v. E Street Theatre Corporation (63 Atl. [2d] 649), it was shown that a Negro attempted to purchase two tickets for a performance and tendered the price fixed therefor. The sale was refused upon the ground that he was a Negro and that it was against the theatre's policy to admit Negroes. Thereupon the Negro brought suit against the theatre company under an act of Congress of March 1, 1875, commonly known as the Civil Rights Act, to recover a penalty of $500 prescribed by the law for its violation.

The higher court refused to render a verdict in favor of the Negro, and said:

"The statute in question was twice passed upon by the Supreme Court and both times held unconstitutional."

Also, see Civil Rights, 109 U. S. 3. Here the Supreme Court of the United States held that Congress exceeded its powers in passing this law and had invaded the reserved powers of the several states. Fundamentally, it held that the Fourteenth Amendment to the Federal Constitution does not endow Congress with power to legislate upon subjects which are within the domain of state legislation.

•

Liability in Patron's Arrest

It is important for theatre managers to appreciate by what rule or plan they or other theatre employes can instigate the arrest of a theatre patron without subjecting the owner of the theatre to damage liability.

The manager had better merely *call* the police officer to stop the disturbance, but not call upon the officer *to make an arrest.* (See Crescent Amusement Company, Inc. v. Scott (40 So. [2d] 882), in which a higher court said:

"The alleged statement that the theatre cashier had made a complaint against appellee in nowise tends to show that the cashier requested appellee's arrest on the charge of disorderly conduct. . . . All of the theatre employes deny making any request at all for appellee's arrest. Certainly no inference is allowable from the testimony of any of these theatre employes tending to show that they instigated appellee's arrest on any charge whatsoever."

For comparison, see the leading case of Wofford v. Stauter (154 So. 124), in which the court held that where a theatre employe merely reports to an officer what he has seen, and an arrest and imprisonment of a patron follows from an investigation subsequently made *by the officer, the theatre owner is not liable* for the arrest and imprisonment.

•

Protecting Trespassing Children

Some theatres are located where homes are immediately adjacent, and near churches and schools, so that even very young children may occasionally get on the theatre premises while at play. The owners of theatres so located would do well to assure themselves that any structure—such as outside stair wells, fire escapes, etc.—are so isolated, by guard rails or whatever else may be necessary, that children not capable of taking what would be "reasonable" care for older persons, are given substantial protection.

Harlow & Gurney (29 S. W. [2d] 681) did not concern a theatre or any structure likely to be on theatre premises, but was, however, a suit brought for the death of a child that had gone on to commercial premises in a residential section. Death was due to a structure entirely legal for such premises; however, it was potentially dangerous to small children, and no protection from it had been provided. The appeal court held the owners of the commercial property fully liable to the child's parents.

•

Liability for Patron's Property

Theatre owners have been held liable for the value of the personal belongings of patrons, such as wearing apparel, that were stolen from a checkroom having an attendant. (*See Hines v. Riley,* 216 N. Y. S. 158).

Higher court consistently hold today that theatre owners may reduce liability for theft of garments from a checkroom by having patrons *sign receipts limiting the valuation* providing the articles are not lost or damaged by negligence of the theatre employes. However, the inconvenience to theatre patrons required to sign such receipts renders this plan rather impractical.

Under no circumstances is a theatre owner liable for loss, damage or theft of valuables deposited by a patron in a checkroom unless the patron proves that the loss resulted from negligence.

The legal rule for determining whether a theatre owner is negligent is: Did the theatre owner, and his employes, exercise the same degree of care to safeguard the patron's valuables as would have been used by other reasonably prudent theatre owners, and their employes, under the identical circumstances? If so, the theatre owner is not negligent and therefore not liable for loss.

In other words, it is the duty of the theatre operator toward patrons that he shall exercise due care and reasonable precaution to *protect* and preserve the patrons' property against loss by fire or theft. If he use reasonable care he may not be liable. However, the jury will decide.

Also, see Willis, 269 Pac. 459. This court held:

"Persons depositing valuable articles with him (theatre owner) expect that such measures will be taken as will ordinarily secure the property from burglars outside and from thieves within . . . and also that he will employ fit persons, both in ability and integrity, for the discharge of their duties, and remove those employed whenever found wanting in these particulars."

Hence, a theatre owner who proves that he employed only checkroom attendants who have good references and reputation, can avoid liability for theft of valuables left by patrons in the checkroom.

DON'T RELY ON SIGNS

An important point of the law is that a proprietor cannot be relieved from liability

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for loss of valuables belonging to patrons, where such loss results from negligence of theatre employes, by posting signs reading "Not Responsible for Loss of Clothing," or "Patrons Are Informed that the Management Will Not Be Responsible for Lost or Stolen Valuables."

This is true further because if the patron testifies that he did not read the signs, they have no legal effect whatever.

However, chances for liability may be reduced *by a check, given to a patron, which states, "Not Responsible for Lost or Stolen Clothing, Unless Deposited in Checkroom."*

Moreover, any sign or notification placed in a prominent location, or printed on a check, may be depended upon to *assist* in retaining the good will of patrons who suffer losses, because the attention of complaining patrons may be directed to such signs. This is about the extent of value of such a receipt or sign.

•

Injury Connected with Violation

A theatre operator is not liable in damages for injuries to a patron caused by the exhibitor's violation of a state law or city ordinance, *unless* the patron positively proves that the injury *directly* resulted from the violation. (*See McDonald v. Chicago Corporation* (83 N. E. [2d] 616).

•

Legal Removability Of Theatre Equipment

LAW SUITS arise over the legal right of theatre owners and lessees, and of sellers of theatre buildings, to remove equipment from the buildings.

A theatre operator, for example, may lease a theatre building and during the period of the occupancy he may install different kinds of equipment and devices such as projectors, an air-conditioning system, new seats, electrical apparatus, suction and ordinary fans, a pipe organ, etc.

After expiration of the lease contract, the theatre operator may decide to remove from the building certain of the above mentioned items, only to discover that the landlord or building owner refuses permission, claiming that they are legal fixtures and belong to him.

Also, theatre operators and lessees frequently find themselves confronted with controversy after a person purchases the theatre building and notifies the theatre operator not to remove equipment from the building. The same situation exists when the mortgagor forecloses.

Frequently the holder of the mortgage may attempt to prevent the owner of the building, or new purchaser of the building, or the theatre operator who holds a lease on the building, from removing equipment and other personal property from the building.

If either the owner of the building, or a new purchaser of the building, or one who forecloses a mortgage or a mechanic's lien on the building, objects to removal of theatre equipment, the theatre operator cannot remove it unless he convinces the court that the equipment is not a legal fixture.

Fixture Defined

In order to be able to avoid litigations of this nature, it is necessary that theatre executives acquire dependable knowledge of the law relating to legal "fixtures." Generally speaking, *a legal fixture is anything that is attached to a building in such a manner that its removal will permanently damage the building. Permanent* is a key word in this definition.

However, in Consolidated v. Smith (189 S. E. 724), it was shown that the owner of a building bolted scales to the floor of the building. Later the owner of the building sold it, and litigation developed when the new purchaser refused to permit removal of the scales.

It was contended that the scales did not become a part of the building and was not a legal fixture because the seller of the building did not *intend* to attach the scales *permanently* to the building. However, the court held the scales a "legal fixture" which could *not* be removed, saying:

"Under the evidence, the jury was authorized to find it was a permanent fixture and a part of the building. There was evidence to support the contention of the plaintiff that it could be unbolted and removed from the building, without injury to the building, but it does not necessarily follow from this that it was not a permanent fixture and part of the building."

Contract Stipulation

Of course, if a theatre operator and a theatre building owner make *a written contract* by the terms of which the theatre operator is given the privilege of removing all installed equipment when his lease expires, the landlord *himself* is bound by this agreement.

On the other hand, one who holds a mortgage or other lien on the theatre building, is *not* bound by the terms of the contract and neither is one who purchases the theatre building. The same law is applicable to *sellers of equipment.* Also, the courts will not rely upon ambiguous clauses in a sale contract which may indicate *a mere intention. See Kimball v. Polakow,* 268 Illinois 344, in which the court said:

"The use of the word 'portable' would not, of itself, establish the fact that it remained personal property after its installation in the building."

For comparison, see Supply Company v. Kaybe (24 Atl. [2d] 570). Here it was shown that a seller sold, under a conditional contract of sale, certain equipment to a lessee of a theatre building. The lessee of the building defaulted in payments. When the seller attempted to repossess the equipment, the owner of the building objected on the grounds that the equipment was a legal fixture and could not be removed from his building.

However, since the testimony showed that the equipment was *not permanently attached* to the building, the higher court held the seller able to repossess.

Also see the leading case of Improvement Company v. Blanchard (50 F. [2d] 737). In this a litigation developed over the question of whether or not a large electric sign should be termed as a legal fixture or personal property. In holding the sign and other movable articles to be personal property, which entitled the theatre operator and lessee to remove them, the court stated the following law:

"A tenant may remove from the rented premises, any time during the continuance of his term, anything affixed thereto for purposes of trade, manufacture, or ornament, if the removal can be effected without injury to the premises. . . ."

For further comparison see Ballard v. Theatre Company (93 Washington 655), where it was shown that a pipe organ was installed in a theatre building by a theatre operator without intention of either landlord or theatre operator to make it a permanent accession to the theatre building.

The organ was attached in such manner that *it could be quickly removed without any material injury to the building,* although to do so required tearing away certain walls which the theatre operator could replace. In holding the theatre operator entitled to remove the pipe organ, the higher court said:

"In determining whether a chattel which has been annexed to the freehold is a trade fixture or a part of the realty, the cardinal inquiry is into the intent of the party making the annexation. It is conclusive, of course, that the chattel annexed is a fixture when it cannot be removed without a material injury to the freehold, as for example, where it is essential to the support of some part of a permanent structure."

Hence, if equipment is installed in a theatre building and is not adapted to removal and installation in another building, the equipment always is a trade fixture and cannot legally be removed.

"Detachable" Equipment

Certain items of equipment, although *not permanently attached* to a theatre building, are regarded by the courts as "legal fixtures" *not removable if the owner of the theatre building sells it without making a stipulation in the sales contract reserving to him the right to remove theatre equipment and fixtures necessary or useful in operation of the theatre.* The same law is applicable where the theatre owner of the building mortgages it. (See Alwes v. Rich-

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heimer 47 S. W. [2d] 1084), in which the higher court said:

"The only question presented by this appeal is whether the articles of furniture and fixtures in the Commodore theatre are fixtures, and therefore a part of the realty covered by the first and second mortgages, or whether they remain personal property, and not covered by said mortgages. . . . We think the articles enumerated above are fixtures, because not only are they attached to the building, but are used and are useful in connection with the operation of the building as a theatre, the only purpose to which it is adapted."

Now contrast with this point of view that expressed in Reno Electrical Works v. Ward (274 Pac. 196), in which installations less immediately associated with the function of the building were judged removable even though attachment was by nails and screws. Here the court said:

"It is true the insulating material was secured to the walls of the building by screws and nails, but not so secured that the fans and materials cannot be removed without injury to the insulation, and also to the building."

Removal Under Lease

If a theatre operator leases a building, including equipment he cannot remove the equipment and use it in another theatre even though he closes the leased theatre and pays the agreed rental. See Car v. State Theatre Corporation (179 Atl. 665), in which the court said:

"Removing the property, adjusting it to the requirements of the new theatres, and restoring it to the demised premises before the expiration of the lease, must of necessity result in greater wear and tear. . . . Consequently the measure of damages is the value of the property at the time of the conversion, with interest to the date of judgment."

Is Equipment Personal Property?

When is theatre equipment subject to assessment for taxation as real estate?

The answer is: When a state statute makes it so, otherwise equipment is "personal" property, and taxable as personal property. (See United, Inc., v. Board of Property Assessment 58 Atl. [2d] 833.)

Lease Contracts

Effective Renewal Notice

HIGHER COURTS have consistently held that if a written lease contract contains a clause that gives the lessee the right to extend a lease through *written* notice to the landlord, the lease cannot be extended (with the force of a contract) by a *verbal* notice. See Medomak *v.* York (57 Atl. [2d] 745), in which the court said:

"The giving of the written notice was a condition precedent to an extension of the lease for an additional term of five years. . . . Since written notice was a condition precedent to effect on extension of the lease, and was never again, the right to an extension of the lease was lost."

Also see Willis, 83 N. E. (2d) 752.

LEASES OVER A YEAR

Moreover, a lease for more than one year is void unless in writing; hence, since neither a verbal agreement to make a lease, nor a verbal lease for more than one year is valid, the tenant *can be evicted* from the premises if he fails to prove that actually a written lease was signed (see Dodge *v.* Davies, 179 Pac. [2d] 735).

Effect of Repair Clause

A tenant is legally obligated to make all repairs necessary for the preservation and protection of the property, if the leasce contract contains a clause which *implies* such an obligation.

The law has been stated in Evans Theatre Corporation *v.* De Give Investment Company (52 S. E. [2d] 655). The lease contract contained a clause to the effect that the theatre corporation would "not commit any nuisance," and would hold the building owner harmless from liability. The court said:

". . . The plaintiff (Evans Theatre Corporation) and not the defendant (landlord) is liable for the cost and expense of structural changes and repairs to buildings on said premises to meet the requirements of the city ordinance for safety and fire prevention."

Providing for Extension

An ambiguous clause to extend a lease is void. See LaSalle *v.* Taft (156 Ill. App. 356), in which a lease contract was litigated containing the following stipulation:

"If the lessee (theatre operator) is desirous of renewing the lease, six months prior notice shall be given to the lessor (landlord) for his consideration."

The court held that this clause did *not* entitle the theatre operator to a renewal.

In another important case (145 N. Y. S. 1004) the lease contract provided that the lease should be renewed on "the same terms from year to year, unless cancellation was made in writing, three months prior to the end of the year." *The court held that the tenant was automatically entitled to have this lease renewed at the end of the year, if neither party gave notice of cancellation three months previous to the termination of the lease.*

Holdover Liability

The law pertaining to holding the premises is *very* important. This is so because contrary to the opinion of the majority of persons, a lessee who retains possession of the property even *one hour* after the lease has expired is liable for payment of the rent *for a period equal to the full term of the expired lease* (see 135 N. Y. S. 633).

Higher courts agree that where a lessee vacates the premises at any time *before* midnight of the day the lease expired, he is liable for payment of rent during the following term.

However, mere notification given to the landlord that the theatre operator *intends* to vacate the premises does not relieve the latter from liability for payment of rent for the complete following term, if he retains possession of the premises after midnight of the day on which the lease term terminates (see Whitton, 33 P. Super. Ct. 283).

Lease Liability

One who leases a theatre building and afterward assigns the lease, remains liable for payment of rent (see Kanawha Company *v.* Sharp, 80 S. E. 781, 783, 52 L.R.A., N.S., 968, Ann. Cas. 1916E, 786; also Insley *v.* Myers, 64 Atl. [2d] 126).

Immediate Eviction

A landlord can compel a theatre lessee to vacate the premises *immediately,* without allowing sufficient time for the lessee to remove his equipment and fulfill contracts for pictures. See Balaban & Katz Corporation *v.* Channel Amusement Company [2d] 27), in which a higher court said:

"The fact that plaintiff (landlord) granted five months extension of the lease did not in any way obligate it to grant more extensions."

Liability in Contracts

AN OFFICIAL or executive of a corporation may be personally liable for acts which he has performed in consequence of his position. Here is a case (Strauss *v.* Berman, 147 Atl. 85) that illustrates this quite fully:

The testimony disclosed that a contractor consulted with the president of a theatre corporation regarding structural improvements for theatre building. Later the contractor submitted to the president a written offer to perform certain repairs for a named price. The president signed this offer opposite the word "Approved." Then he signed his name *below* the words "Independent Theatre Corporation." The contractor accepted the contract and wrote to the official, who acknowledged the letter as follows:

"Herewith confirming your letter of December 15th, to build a new upright for Embassy theatre and as per your letter. He signed the letter with his name *over the typed name of the corporation.*

The contractor performed the repair work, then sued the president personally for

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the money due. The court decided that the president's signature affixed to the contract and letter *did not indicate conclusively that he was acting for the theatre corporation.* Hence the court held the president personally liable, stating:

"The written acceptance on the face of the contract was that of the defendent rather than that of the corporation. His individual signature personally was written opposite and to the right of the word 'Accepted,' while the words 'Independent Theatre Corporation' were written one line above. The corporate name written above did not *release him from liability. . . ."*

Hence, the fact that the president signed a contract having the corporation's name thereon did *not* release the president from personal liability.

The same rule of law is applicable to *all officials* of corporations, and executive employes of other employers. See also the leading case of Gill *v.* General Electric (129 F. 350). Here the testimony showed that a manufacturer submitted a proposal to a firm named Gill and Company. The proposal was accepted as follows:

"To General Electric Company: Your proposal, as above, is hereby accepted. G'll and Company, by W. B. Gill."

Gill was an employe of the firm and employed on a salary basis. Later the manufacturer sued Gill to recover the money due The court held Gill liable, saying:

"It is true, that he (W. B. Gill) was not a partner in the firm of Gill and Company, but it is also true that it is impossible to ascribe any other significance to his signature."

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Avoiding Personal Liability

A review of late and leading higher court decisions disclose that an offical or executive employe is relieved of *all risk* of personal liability on contracts which he signs for his employer if (1) *the name of the employer appears in the body of the contract, or on the letter-head;* (2) *the word "by" or "per" precedes* his signature; (3) *his capacity or title follows his signature;* (4) and *the employer's name precedes the written signature,* as follows:

THE THEATRE CORPORATION,
By W. C. White, President.

Sometimes the mere difference between the words *by* and *for* is important to the outcome of the liability of an agent who signs a contract for his employer. See Tucker Company *v.* David, 98 Mass. 101. In this case the employer signed a contract as agent "of" his employer. This court held *the employe personally liable on* the contract and said:

"The variation between the words 'for' and 'of' seem at first view slight. . . . 'Agent of' a corporation named simply designates a personal relation of the individual to the corporation. 'Agent for' a particular person or corporation designates . . . that the act is done in behalf of and as the very contract of that other."

Therefore, an *ordinary* employe or an official who signs his name "agent *of*" his employer, may be held personally liable on the contract. On the other hand, an employe or official who signs his name "agent *for*" his employer, never is liable.

•

Manager As Agent

With respect to contracts made by a theatre manager, a theatre corporation is liable on *all* contracts made by its manager relating to the theatre business.

However, one who attempts to hold a theatre corporation liable must prove that the person who made the contract was *an authorized manager of the theatre to which the contract related,* otherwise the theatre corporation is not liable. *(See State Amusement Company* v. *Thompson,* 21 S. W. [2d] 344.

[Other Theatre Law on page 76]

MANAGEMENT'S MAINTENANCE NOTEBOOK

[For maintenance of hung plaster auditorium ceilings see page 41; for maintenance of projection and sound equipment see Subject Index, page 4, under Projection.]

LOOSE DOOR HANDLES can be tighetned by unscrewing one end of the knob (after loosening the small screw found on the shaft) and placing a metal washer or ring of wire around the shaft. If the handle is still loose, add washers until all play is taken up.

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GILT FRAMES can be safely cleaned with a solution of equal parts of ammonia and denatured alcohol. Wipe on with cheesecloth with as little pressure as possible. Clean only a small area at a time and never rub. Use a dry pad of cheesecloth to absorb the soil on the wetted area before going to the next uncleaned area. To prevent the gilt on the frame from drying and cracking, put on gently a little lemon oil after cleaning.

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MILDEW in storage rooms can be pretty well prevented by placing calcium chloride in stacks of open wire letter baskets, having containers underneath to catch the drip or moisture that forms when the calicum chloride liquifies. Then clean off any mildew present thoroughly, and wash the walls or stored material with a mildew-proofing preparation obtainable in any hardware or paint store.

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SPOTTED MARBLE can be cleaned with raw linseed oil. Dampen a soft cloth with the oil and run it over the surface, then wipe it off thoroughly with a clean, soft cloth and finish off with a small amount of paste wax.

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VENETIAN BLINDS should be dusted with a lamb's wool brush. The tapes can be dusted with a stiff brush and then wiped off with a cleanser. Plastic-finished slats with weather stains should be wiped off with a damp cloth. Weather stains on painted wooden slats, however, should be wiped off with a good cleanser. The blinds should never be scrubbed with harsh cleansers, and a lot of water on the slats will look muddy around the tapes. Never jerk sharply up or down on the blinds. The slats should always be adjusted so that they are horizontal, and then be firmly raised or lowered or secured in place in one smooth motion.

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DISINFECTANTS: To use to best advantage such a common preparation as an insecticide, disinfectant, germicide, antiseptic and deodorant, one should read the label carefully so as to distinguish exactly one from the other. A disinfectant or germicide kills disease germs. An antiseptic prevents the growth of disease germs, but it is not a disinfectant unless it can destroy germs as well as prevent their growth. A deodorant destroys odors, but it is not a disinfectant unless it also can destroy germs. An insecticide kills insects and is not a disinfectant. Insecticides will not kill germs, and even powerful disinfectants will not destroy insects.

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TOILET ROOM BOWLS: To remove stains of long standing from restroom bowls, a weak (5%) solution of oxalic acid is effective. Do not leave the acid on too long, as the finish might become weakened. Let it stand in the bowl a few seconds, brush the stained parts or rub with paper toweling. Flush out several times with clear water to remove all traces of the acid. Be sure to protect your hands.

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FAUCET WASHERS: Rubber washers will soon deteriorate. Use one of special composition, with the dull side toward the pipe supplying the water. If the faucet seems too tight, a drop of light oil in the socket will help tighten the nut and thus loosen the faucet itself.

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WALL SPOTS: Dirty spots can be readily removed from walls with a paste of Fuller's earth and carbon tetachrachloride. Apply thickly to the spots and thin out at the edges beyond the soiled areas; then let dry over night, and finally remove the loose powder with a cloth or sponge dampened with cold water. Repeat this if necessary.

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STANDEE RAIL: Wood paneling at a standee rail, wainscoting, etc., can be made to take hard wear without marring by treating the surface with linseed oil and rubbing it down with steel wool. Three such treatments should be given on successive days.

•

TARNISHED BRASS: Corrosion of brass fixtures can be cheaply removed by applying a heavy cream made of linseed oil and rottenstone. Apply with a sof cloth and rub until the tarnish disappears. Wipe off with linseed oil and polish.

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WATER STAINS on woodwork which has been shellacked can be made less noticeable by rubbing over them with a little denatured alcohol.

INSPECTION GUIDE: Faults to look for, with suggestions for their correction, were detailed for all classes of equipment, and the building, in the 1949 GUIDE Number of Better Theatres (then designated the Market & Operating Manual).

PROJECTOR ALIGNMENT

1. Mechanical Method

THE LIGHT from the two projectors in a theatre is not always of equal intensity. This variation can range from a few per cent to as much as 50%. There should, of course, be none.

In dealing with the problem here, we are primarily concerned with reflector type systems using suprex carbon trims.

It is rather difficult to evaluate the light intensity of two projection systems when film is being used, especially since most changeovers are not made on similar scenes of the picture. Therefore, light intensity checkups should be made *without film,* but *with shutter running.*

There are three methods of comparison. One, by making rapid changeovers from machine to machine; the second, by using a pair of split aperture plates; and the third, by using a screen light intensity meter.

The first two will serve to give a *qualitative* check because the change in color can be more readily observed by the eye. The third method will actually give the *quantitative* difference in light intensity.

A meter should be used in the third method which has a corrective filter allowing it to measure only those light radiations which are visible to the eye. By using a light meter for actual intensity measurements, and rapid changeovers for color comparisons, the best balance can be obtained between any two projection systems.

FIRST INVESTIGATION

When a light test is made and it is found that the light intensity for the two machines is not equal, here is how one should look for the trouble:

1. *Check current used in both lamps.* Naturally the average current and the arc gap should be the same for both arcs. Since most lamps now have individual ammeters, they should be compared with the generator panel meter, or with a good standard portable ammeter. This calibration is rendered necessary because lamp ammeter shunt leads, and meters themselves, often are damaged by the excessive heat of the arc and by the carbon ash deposits which accumulate over them.

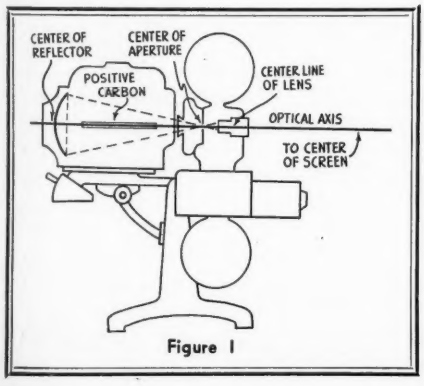

Figure 1

2. *Check reflectors.* Glass reflectors may become pitted by the particles of molten copper and incandescent carbon. Their silver backing may become tarnished and lose its normal, reflectivity. A check can be made here simply by swapping reflectors between machines to determine if either one is at fault. Another method would be to replace them with a known *good* reflector. This procedure not only would show up the defective reflector, but would also indicate if there was any deterioration on both machines.

3. *Check projection lenses.* Practically all new lenses are hermetically sealed and should never be opened in the field. A comparison can be obtained between machines by changing lenses around to determine if the light transmission through one of them has become impaired.

4. If none of the above tests indicate, or eliminate, the difference existing between two machines, *then it becomes almost certain that in some manner the optical alignment of either projector system has been disturbed.* (Figure 1 indicates the optical axis of a lamp-projector system.)

OPTICAL MISALIGNMENT

There are several symptoms of improper optical projection alignment. Light distribution on the screen may be poor, and the field cannot be cleared or balanced properly. This unbalance will sometimes be accompanied by discoloration on the extreme corners of the screen, where all four corners will not be of the same color (either blue or brown).

It may be found that in order to obtain the best possible light, the reflector carriage has to be located in an abnormal position (the plane of the mirror will not be at right angles to the positive carbons). The positioning of the carbon crater will become extremely critical and the slightest change will cause visible light and color change on the screen. The carbon may have to be operated with a lopsided crater to try to obtain more light.

All the above symptoms can indicate that

Lorraine carbons

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LEAD IN SCREEN LIGHT
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Lorraine Carbons lead in Screen Light brilliance. The light is evenly distributed to every corner of the screen.

Economy 1 . . . LAMP MAINTENANCE—New copper-coating process now designed to eliminate pitting of mirrors. The copper coating does not strip back but recedes in minute bead form. Hence, mirror replacement and re-surfacing costs become negligible.

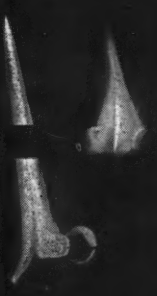
Economy 2 . . . SAVING IN CARBONS—Lorraine Carbons burn at a slower rate, giving a steadier, more even light distribution on the screen.

Economy 3 . . . CURRENT CONSUMPTION—Lorraine Carbons produce more light at lower amperages.

Lorraine Carbons are now cellophane-packed to insure an air-tight moisture-proof product.

FOR ANY LAMP . . . ANY SIZE THEATRE OR DRIVE-IN

Write for distribution data.



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BOONTON, NEW JERSEY
NEW YORK: 234 WEST 44th STREET

some part of the projection equipment is not in proper alignment. Misalignment can occur in a field assembly of the various parts.

LINE-UP TOOLS

There is one location on the optical axis which can serve as a point from which all other equipment can be lined up. That is the projection head. The projection lens center line position is rigidly fixed with relation to the film aperture plate, therefore it is best to start from there.

A good line-up tool assembly consists of a dummy lens with a longitudinal central hole properly bored so that it can serve as bearing for a rod of approximately 8mm diameter. This rod can be extended through the lens center and through the aperture center into the lamphouse. The rod must then be able to rest in the positive carbon holder and positive carbon guide without being bent, forced, or distorted.

Figure 2 shows a sketch of the dummy lens and the rod. For this purpose an aluminum bar is turned down to the

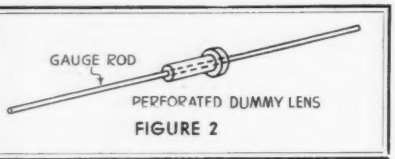


FIGURE 2

diameter of a standard lens barrel and a $\frac{5}{16}$-inch hole is bored in the center along its axial length.

A piece of steel drill rod 36 inches long, and with a diameter of $\frac{5}{16}$-inch, is used as the line-up medium. A drill rod was chosen because of its accuracy and its perfect straightness. The $\frac{5}{16}$-inch size is very close to the 8mm requirement, and it can easily be obtained.

When the rod is resting in the dummy lens at the projector head, it is slowly passed into the lamphouse until it goes through the positive carbon guide. The positive carbon clamp should be disconnected—*and care must be observed so that the rod be not forced out of line by the weight of shutter blades, dowsers, or other attachments.*

Rotate the rod slowly to make sure that it has no bends. *To be absolutely safe while using the gauge, it is best to pull the fuses from the machine motor circuits so that the machine may not be started accidentally.*

EFFECTING ALIGNMENT

If the positive carbon guide does not line up perfectly with the rod, the lamphouse should be moved in the proper direction until the line-up, both vertical and horizontal, is correct.

It will be found that most older pedestals allow for lateral adjustment, but not for vertical adjustment; therefore shimmering may become necessary.

Due to various pinned connections in old-style bases, it may also be necessary to change the amount of shimming between the front and rear of the lamphouse.

Having adjusted the position of the lamphouse so that the positive carbon guide is on the optical axis, the positive carbon holder should then be checked. The holder should be relocated in its position and its jaws should slide on the steel rod for the full travel of the carriage without binding or in any way distorting the gague rod. This condition will indicate that the positive carbon is on the optical axis and will remain so for the full burning time, insuring a perfect positive crater at any position of the carbon.

Now that the positive jaws and rest are properly located on the axis, the gauge rod can be pushed towards the reflector. The negative carbon guide will have to be removed. The steel rod should pass through the reflector hole exactly in the center, and the plane of the reflector should be at right angles to the rod.

Invariably when these adjustments are properly made, the light projected on the screen will be improved and both machines will be equalized.

•

2. Optical Method

THE OPTICAL method of aligning projection lighting systems has the advantage of requiring only one implement, a *pinhole aperture plate* (which can be made locally, but which also can be procured, machined with proper precision, from Heyer-Shultz, Inc., Cedar Grove, N. J.).

The pinhole aperture consists of a device which cuts down the size of the standard film gate aperture from the normal

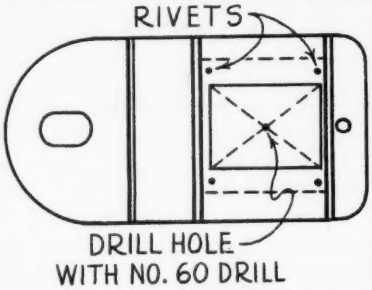


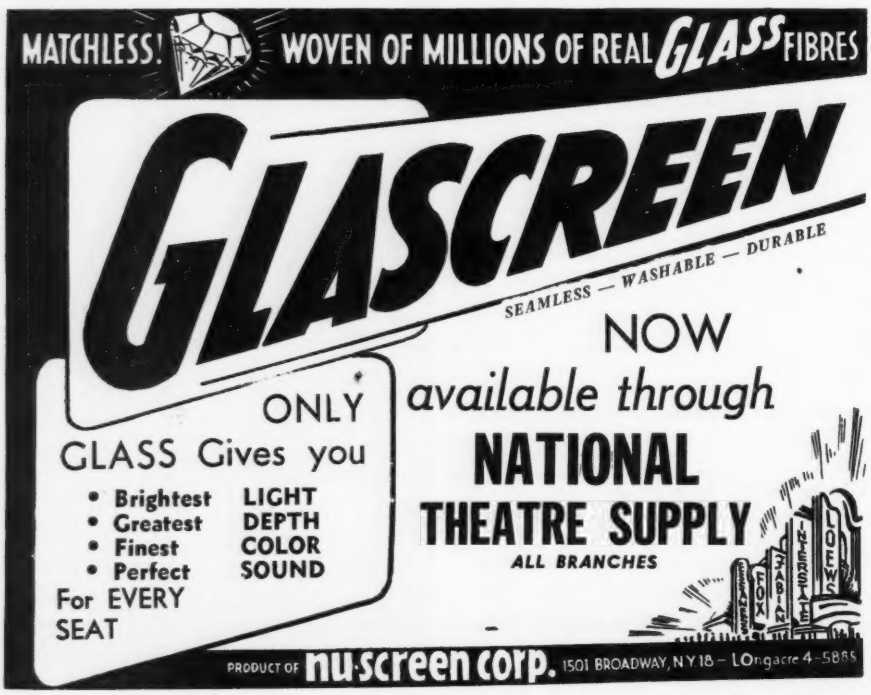
FIGURE 3: How a regular aparture plate may be fashioned into a pinhole aperture plate. The normal aperture can be covered over by riveting a piece of thin metal to its surface; then this centerpiece can be perforated to form the pinhole. If possible use a No. 60 drill and locate the hole at the intersection of the normal aperture diagonals. This type of test aperture plate will be centered on the optical axis when full inserted. A properly focused image will be formed by merely replacing the standard aperture with the test aperture.

rectangle of .825x.600-inch to a tiny hole. The smaller the diameter, the better the results.

FUNCTION OF PINHOLE

When the pinhole aperture is located in the projector, it actually becomes a *field stop,* reducing the size of the illuminated area on the screen, but not changing the relative illumination at that point. It allows a tiny pencil of light to pass through the center of the aperture and to "paint" a picture of the total surface of the reflector as it is illuminated by the incandescent arc crater.

The procedure for using the pinhole aperture is as follows:



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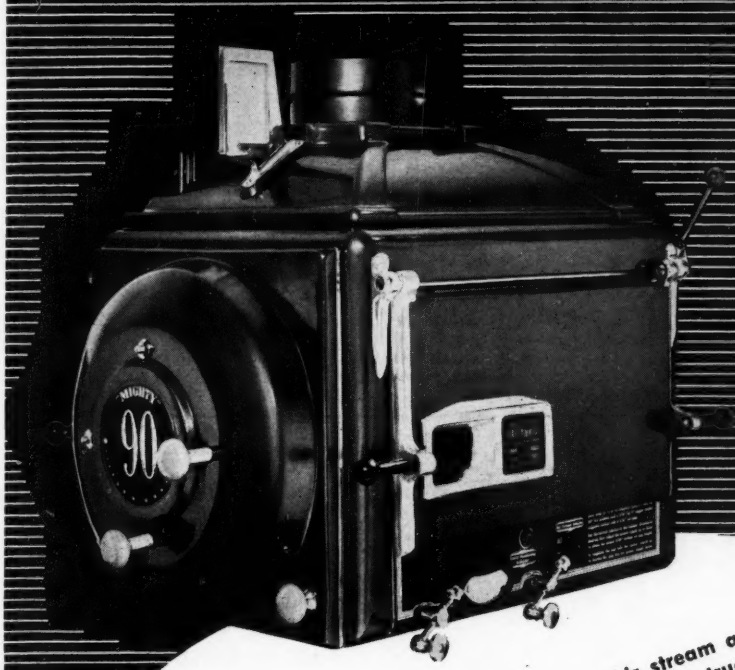

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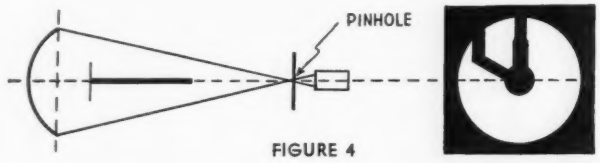
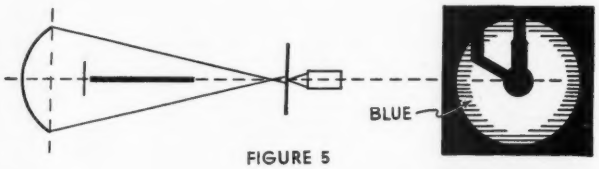


FIGURE 4



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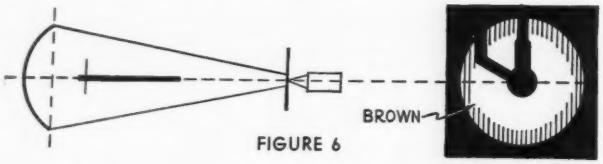


FIGURE 6

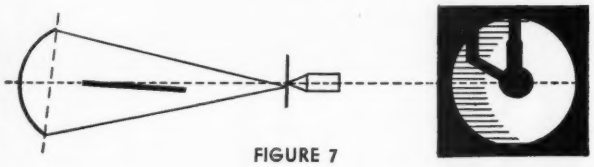


FIGURE 7

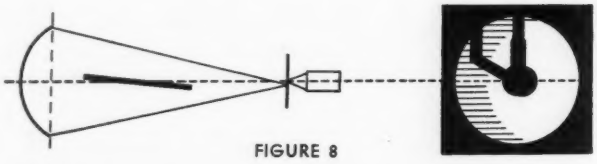


FIGURE 8

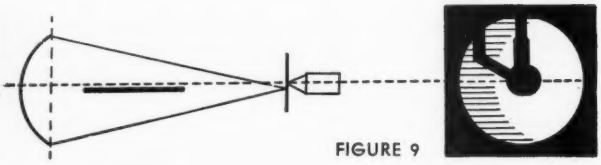
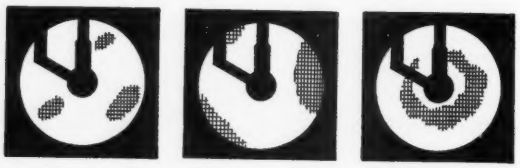


FIGURE 9

FIELD OF REFLECTOR IMAGE UNDER DIFFERENT CONDITIONS OF ALIGNMENT (see text below for explanations of Figures 4, 5 and 6): FIGURE 7 shows a condition in which the whole lamphouse rests at an angle to the optical axis. This angle may be horizontal, but can be vertical as well. The lamphouse supporting base, pedestal, supporting bolts, and carriage slides should be examined and the lamphouse should be shifted regularly until the image on the target is cleared. FIGURE 8 shows the condition when the positive carbon rest, or holder, has been moved from its proper axial position. Either the V-rest has worn badly, or has been shifted from the factory pre-set position. Another cause is the carbon holder itself, which may have shifted in its insulated fastenings. To correct this condition, check the carbon V-rest to see if it has been burned or worn too large; check also the insulators on the positive clamp column to see if it is out of position. FIGURE 9 shows a condition in which the entire lamphouse, although parallel to the optical axis, has been shifted laterally due to lamphouse carriage movement. This condition may also apply vertically if heavy shims are used under the lamphouse or between sound-head and projector. To remedy this condition, use a steel rod gauge as mentioned in the preceding article, and shift the lamphouse until the positive carbon is properly located on the optical axis. FIGURE 10 is representations of patches of discoloration of the field of the reflector image which indicate that sections of mirror are not in correct focus.

FIGURE 10



1. Strike the arc and make sure the lens is in proper focus. Run your machine.

2. Remove the standard aperture plate and replace it with pinhole plate.

3. Place a white card in front of the lens and move it back and forth until a place is found where the image of the reflector is sharply in focus. Support the card in this position and observe what happens to the image as the various controls are changed.

The image will be a circular spot of light approximately 2 inches in diameter. In the center it will have a circular dark section, which is the shadow of the positive carbon and the central hole of the reflector. There will be also the inverted shadow of the positive carbon holder and carbon guide. With the exceptions of these shadows the whole field of the reflector image should be clear white and even overall. If this is the case, the entire system is in correct alignment and the reflector is in correct focus. This is illustrated in Figure 4 (in group of drawing's above) and represents an ideal condition.

Now move the positive carbon away from the reflector. You will see that the clear white part of the image will become smaller and smaller, and that a blue ring will appear on the outer periphery of the circular image. This condition is indicated in Figure 5. As the positive carbon is moved farther away from the reflector, the blue area will get greater, showing that only the blue gas flame of the arc is being focused by the reflector on the aperture plate.

Now move the positive carbon back closer to the reflector. You will note that another ring is formed around the periphery of the image, but this time it is brown, indicating that the solid part of the carbon behind the crater is being focused by the reflector on the aperture plate. This condition is indicated by Figure 6.

By checking the position of the carbons for producing the best and clearest field on the image reflected by the target in front of the lens, you can definitely mark the indicating card on your lamphouse: that will be the best running position.

CHECKING FOR MISALIGNMENT

With the carbons located properly, move the reflector adjustments and you will note that the image will be darkened by blue or brown half moon shadows, which show that parts of the reflector is out of focus.

It should be possible to clear out these shadows by centering the reflector if the lamp center line, the positive carbon, and the reflector are correctly aligned with the aperture and lens axis.

If there ever is a time when a clear white field cannot be obtained by (1) adjusting the position of the positive carbon, and (2) changing the inclination of the reflector, then it is practically certain that lamphouse, or carbon carriage, or both, are out of line with the aperture and lens axis.

When this condition exists there definitely will be a loss of light and an uneven field on the screen. Conditions like these are illustrated in Figures 7, 8, 9.

A pin-hole plate, dummy lens and rod gauge, are invaluable tools for maintaining maximum projection light efficiency.

CHECKING THE REFLECTOR

Another test that can be made with the pinhole aperture is the determination of

the accuracy of the curvature of the reflector.

After the carbons, lamphouse and projector have been perfectly aligned on the optical axis, conditions may be noted by looking at the image of the reflector on the target, such as shown in Figure 10. Uneven blotches of color, either blue or brown, may be seen in various parts of the white field. The edges of the image, or odd sections, may show off-color shadows of no particular pattern.

These spots may be eliminated by moving the positive carbon, *but* other colored spots will then appear.

The only remedy is to replace the reflector.

—Gio Gagliardi.

PROJECTION-SOUND MAINTENANCE CHECK

CHOICE OF original items of equipment which provide the performance must be given careful consideration. *Equipment which is overloaded, or which does not contain a sufficient safety factor, will have a tendency to break down frequently and cause annoying and dangerous show interruptions. On the other hand, equipment which is extremely oversized and underloaded may not operate at its greatest efficiency.*

Much equipment which would give years of useful service is removed because of its improper installation. However, one of the main reasons for long life of equipment is constant, conscientious service.

Following is a detailed list of sound and projection equipment parts which should be checked periodically in order to provide the maximum assurance against breakdown.

CURRENT RECTIFICATION

1. Main switches and fuses at service board.
2. GENERATORS: Line switches—starting mechanism—low voltage and overload releases—commutator surface—condition of mica undercutting—carbon brush wear and tension—bearing lubrication—rotor clearance—condition of field and armature insulation—cleanliness.
3. RECTIFIERS: Line switches and fuses—overload and high temperature releases—ventilating fan interlocks—transformer tap connections and switches—condition of winding insulation—condition of rectifier plates or bulbs—ventilating fan or blower motors—cleanliness.
4. DIRECT CURRENT SWITCHING PANELS: Switch blades and studs—bus bar connections—knife blade fuses.
5. RHEOSTATS: Overheated or grounded resistors—equalizing switches—connecting lugs. . . Use of correct rheostats for generator d.c. voltage to obtain proper generator compounding.
6. WIRING: Overheated wiring sections—deterioration of insulation—overheating of lug connections—grounded leads.

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2. MACHINE D.C. SWITCHES: positive and negative flexible leads and terminating lugs.

3. POSITIVE AND NEGATIVE CARBON JAWS AND CLAMPS: carbon guide wear—carbon clamp pressure.

4. Insulation of positive and negative assemblies.

5. REFLECTORS AND CONDENSERS: Cleanliness—damage (discoloration and excessive pitting)—shields—positioning controls.

6. ARC FEED MECHANISM: Motor commutator—carbon brushes—bearings (beware of excess lubrication)—gears and bearings of reduction gear boxes—clutches driving positive and negative carbons—proper setting of speed control for most economical carbon feed.

7. AMMETER CALIBRATION: Condition of shunt and ammeter leads and lugs.

8. Alignment of positive and negative carbons with reflector or condenser axis. Use proper gauges.

9. VENTILATION OF LAMPHOUSE. Check exhaust blower—motor lubrication and connections—clean all exhaust ducts and rotor blades of carbon ash deposits.

10. Flame shields and Lamp housing.

PROJECTION HEADS—

1. LUBRICATION: Intermittent — sleeve bearings—ball bearings—outboard bearings.

2. SPROCKETS: Check for undercutting, hooking, wear due to roller mutilation.

3. FILM GATES: Check shoe and guide wear—adjust pressure—check lateral guides.

4. GEAR TRAINS: Check for excessive wear and broken teeth—proper mesh.

5. BEARINGS: Check for wear and end play.

6. SHUTTERS: Check for correct cut off—and for travel ghost appearance.

7. CLEANLINESS: Operating surfaces must be kept spotless and inspected for sign of film damage.

8. LENSES: Check steadiness of lens mounts—focusing apparatus—keep outer lens surfaces clean and polished.

9. Use of visual test reel to test for film jump, weave, ghost travel, lens focusing and lens aberrations.

SOUNDHEADS—

1. MOTOR DRIVE: Starting switch—centrifugal switch — electrical connections — all mechanical couplings.

2. LUBRICATION: Motor bearings (do not over-lubricate)—Gear boxes—ball bearings for impedance rollers, etc.

3. GEAR TRAINS: Check for wear and broken teeth—open gear boxes for periodic examination.

4. GUIDE ROLLER ASSEMBLIES: Check motion and wear on film guides—roller bearings—film pressure rollers—lateral film setting for proper film track location—use buzztrack.

5. EXCITER LAMP: Wiring connections—meters and control rheostats—lamp sockets and filament focusing.

6. OPTICAL UNIT: Clean outer lenses—check for oil penetration—check proper focus with SMPE frequency test reels.

7. PHOTOCELL: Check voltage-wiring—socket connections—microphonics—output.

8. PHOTOCELL TRANSFORMERS: Check connections—mounting and terminal strips.

9. MACHINE PREAMPLIFIERS: Check tubes—connections—voltages.

10. Check for flutter.

11. Check switching points and individual volume controls.

FILM MAGAZINES—

1. Check spindle bearings and oil.

2. Check hold-back tension of upper magazine. shaft.

3. Check take-up clutch to prevent excessive film tension.

4. Magazine doors must have snug fit.

5. Check magazine rollers and bearings for sharp edges and bad wear.

AMPLIFIERS—

1. Check all tubes.
2. Examine all parts physically.
3. Make transmission runs to check frequency charactersitics—use test reels.
4. Make overload tests.
5. Check all connections and contacts.
6. Clean all volume controls.
7. Keep entire equipment clean.

POWER SUPPLIES—

1. Check for voltage and current output.
2. Check tubes or inspect rectifier discs.
3. Check all wiring connections.
4. Examine for overheating.
5. Keep clean.

HORN SYSTEM—

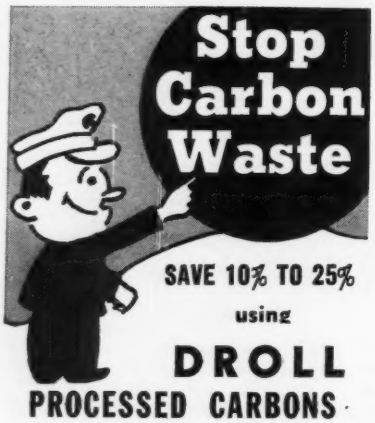
1. Check individual units.
2. Check field and speech terminal connections.
3. Check emergency switching.
4. Keep clean.

SCREEN—

1. Check incident light—use light meter.
2. Check distribution of light.
3. Check reflectivity of screen surface.
4. Check perforations.
5. Check masking.

This list of items indicates the complexity of the equipment used to provide a motion picture performance in a theatre. It is very important that the proper technical know-how be used in selecting and servicing any of its links.

GIO GAGLIARDI.



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ACOUSTIC DESIGN AND TREATMENT

RECOMMENDATIONS of the Research Council for optimum reverberation time of motion picture auditoriums (*see chart on page* 58), are based upon what many architects, acoustical and equipment engineers, and studio and theatre personnel, have experienced in designing, equipping and maintaining theatres. The general adoption of these optimum recommendations would tend to eliminate a major cause of sound distortion in theatres.

REVERBERATION is the persistence of sound, due to repeated reflections.

The **REVERBERATION TIME** for a given sound frequency is the time required for the sound energy, originally in a steady state, to decrease (after the sound is stopped) to one-millionth of its initial energy value. Thus the time, in seconds, required for a sound to decay 60 decibels is the reverberation time.

An **ECHO** is a sound wave which has been reflected, or otherwise returned, with sufficient magnitude and delay to be perceived in some manner as a wave distinct from that which was directly transmitted.

ACOUSTIC PROVISIONS

There are two general methods used in curing both the concentrated echo and reverberation effects in a defective auditorium. One might be termed as the "brute force" *sound absorption* method; and the other, the *sound dispersion* or diffusion procedure.

One cure for reverberation is the introduction into the auditorium of sufficient sound absorbing material.

This type of cure, however, can be *excessive in two ways.* Materials may be used which absorb *only a part of* the sound frequencies; or *too much* material may create excessive over-all absorption.

Some acoustic materials have varying degrees of absorption for the different fre-

quencies, and only a small amount at the low frequencies, will cause the sound to be boomy, and the voice and instruments hardly distinguishable because of the loss of overtones.

TOTAL ABSORPTION VALUES

There is practically no acoustic material which has the same absorption factor for all frequencies, and all of them drop by varying degrees at the low end. Fortunately, the ear is less sensitive to low-frequency than to high-frequency sounds, therefore more reverberation is permissible at the low frequencies and the material may be less efficient at this end.

However, a definite balance must be maintained in order to avoid noticeable "boominess" at the low frequencies, and excessive "deadness" at the highs.

An ideal auditorium acoustically is one in which the energy density of the generally

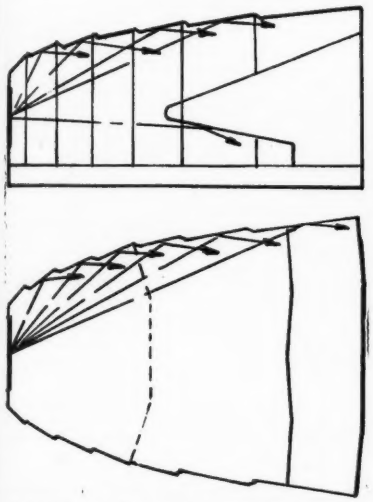

FIGURE A—Plan and longitudinal section of an auditorium (comparable in contour to that represented in Figure 2), showing splayed side wall and ceiling panels. The reflections are broken up in intensity, but tend to reinforce the sound towards the rear of the auditorium above and below the balcony.

reflected sound is practically the same for all parts of the auditorium, and *this reflected energy serves to reinforce the projected sound itself. If this reflected energy is eliminated by an excessive amount of acoustical material, the amplifier capacity has to be increased and the horn coverage must be made perfect in order to prevent great differences of sound levels over all parts of the auditorium.*

It cannot be denied that in order to cure excessive reverberation time, many theatres have been overly padded and have lost their character as individual auditoriums with respect to *both* sound and appearance.

RECOMMENDATIONS

The Academy Research Council has made acoustical recommendations for new construction that have been adopted by many designers. They are essentially as follows:

1. The cubical contents should be kept to a minimum consistent with the number of seats required (see accompanying Auditorium Volume Chart on next page).
2. The auditorium width should be from 50% to 70% of the length, and the ceiling height not more than 40% of the length.
3. Non-parallel surfaces should be used.
4. Convex, rather than concave, walls and ceiling sections should be provided. The wall and ceiling surfaces should also otherwise be broken up so as to diffuse the sound thoroughly.
5. The average absorption per square foot on the floor and ceiling should not be appreciably different from the average absorption per square foot on the side walls.
6. Well upholstered seats and padded carpet in the aisles should be provided.
7. The backstage should be so shaped and so acoustically treated that resonant reinforcement of sound will not be re-

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flected into the auditorium to distort sound quality.

These represent agreement among authorities, and they supply practical guidance for the designing and finishing of auditoriums so that the sound elements of motion pictures are given at least adequate consideration.

EXISTING THEATRES

Making acoustical improvements in existing theatres is often an expensive proposition, and for that reason it should not be attempted haphazardly. The changes should be correctly studied and properly planned so as to insure the attainment of the desired results.

Usually acoustical improvements are incorporated into a general scheme of auditorium renovation or redecoration, in which case the new surfaces and finishes should be carefully chosen to assist the acoustical changes.

Figure A (page 57) indicates a theatre where the curved side walls are broken up into many small splayed panels. The reflection of sound energy from each of these panels is small, it is diffused, and it is projected towards the rear close to the side walls. The reflection from the ceiling splays is also quite random and diffuse.

Flat parallel walls, or large concave wall areas in auditoriums of all sizes, have always been a distinct source of trouble because the first gives rise to disturbing sustained cross-reflections, and the second focuses the reflected sound into some section of the seating areas. Both of these faults tend to reduce screen presence and intelligibility.

TREATMENT TECHNIQUE

If the structure of the walls cannot be changed to conform with the new splayed areas, another remedy is to cover them with a *good type* of acoustic material. The material should be applied in random sections and areas and not made to cover the complete surface.

This patch-like application has been found to break up the solid reflection into random and diffuse rays which, although maintaining the "character" of the auditorium, will eliminate troublesome heavy-order reflections.

The rear wall of the auditorium should be treated in a similar fashion. If liveness is to be maintained without interfering echoes, the surfaces should be broken up either by plaster multi-directional convex surfaces, or by the application of panels of acoustic materials placed at random so as to avoid uniformly opposite reflective surfaces.

EXAMPLE: Plan and section drawings of the Lindenhurst theatre on page 17 indicate the forms and acoustical treatment employed in a balcony type theatre in which design and materials are combined to make the auditorium an efficient component of the sound system. Volume was held to a minimum, walls were constructed in non-parallel sections. Some panels of rock wool blanket were placed on the rear walls, including the balcony; and the horn area was lined with rock wool to prevent resonance. Seating was installed with cushions having maximum sound absorption characteristics, while carpeting was installed over foam rubber lining.

GIO GAGLIARDI.

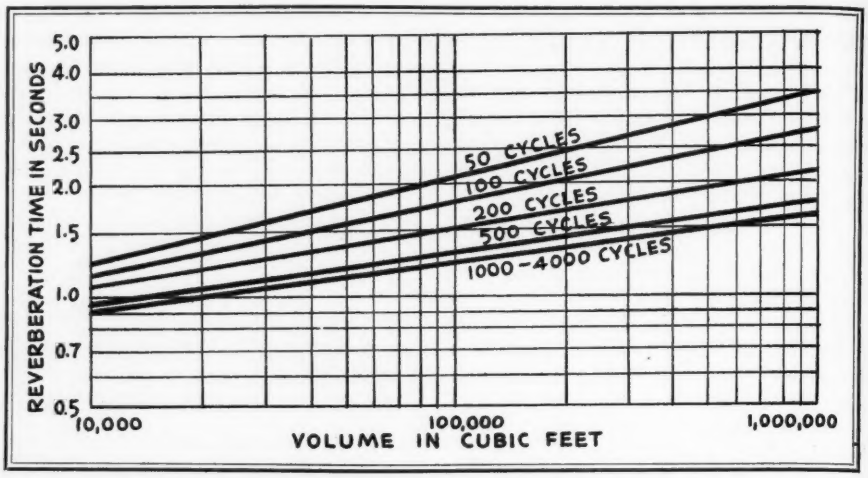
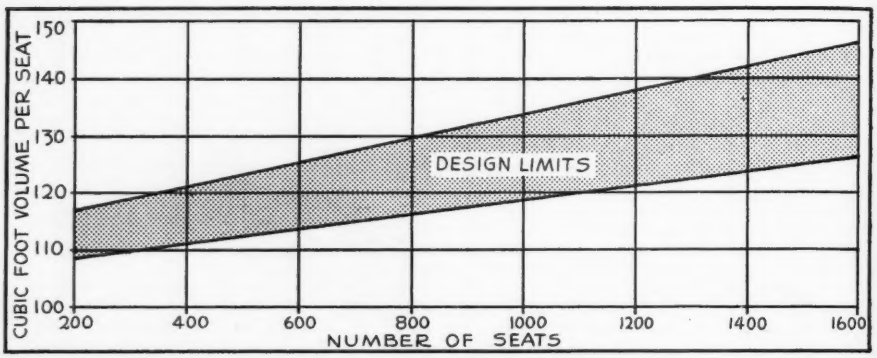
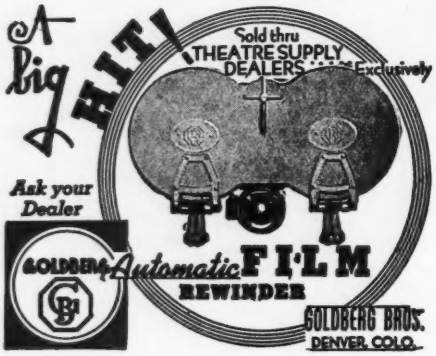
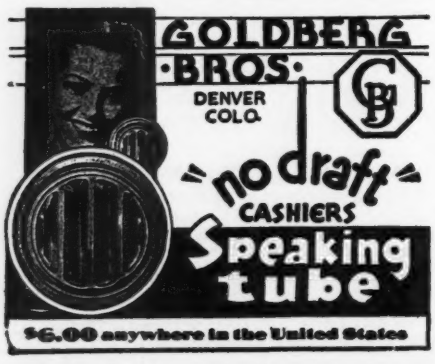


Chart of accepted optimum reverberation time for motion picture auditoriums.



Auditorium volume chart, indicating acoustical relation of cubage to capacity.





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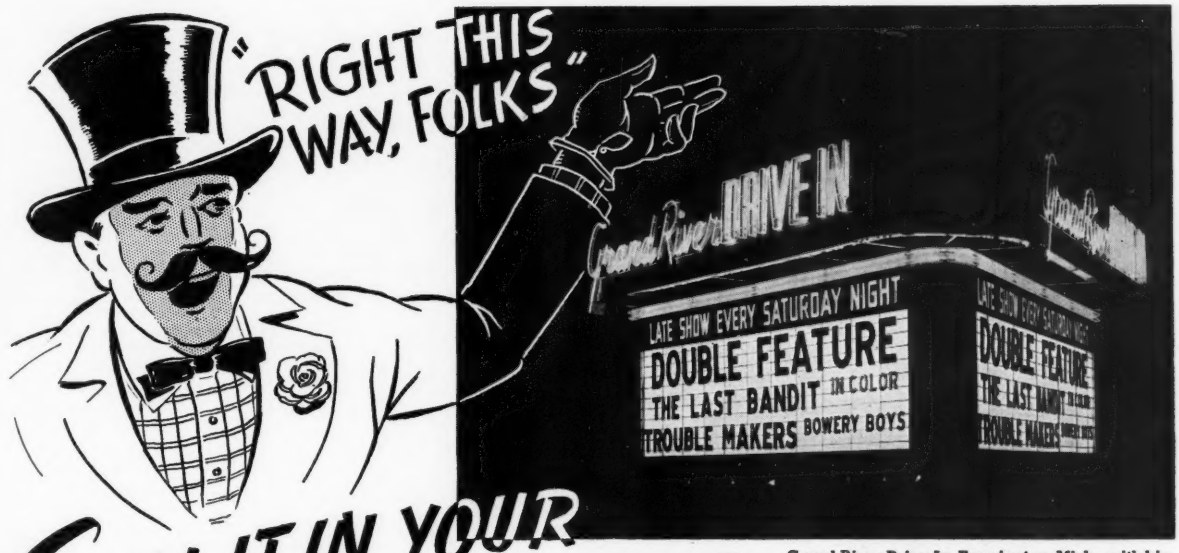
"RIGHT THIS WAY, FOLKS"
Grand River DRIVE IN
LATE SHOW EVERY SATURDAY NIGHT
DOUBLE FEATURE
THE LAST BANDIT IN COLOR
TROUBLE MAKERS BOWERY BOYS

Grand River Drive-In, Farmington, Mich., with big, bold, easily read display in 24", 16" and 10" Adler "Third-Dimension" Cast Aluminum letters on Adler "Remova-Panel" Frames.

SAY IT IN YOUR DRIVE-IN SIGNS with ADLER

Boulevard Drive-In Theatre, N. Miami Beach, Fla., another attention-compelling use of 17" and 10" Adler 2-Tone "Third Dimension" PLASTIC letters, on Adler "Remova-Panel" Frames.

BOLD, DRAMATIC "THIRD DIMENSION" 2-TONE PLASTIC & CAST ALUMINUM LETTERS

The way to get patrons off the road and into the theatre is to *slow them down and lead them in* with Adler modern magnetic changeable program display.

The colorful beauty of Adler PLASTIC letters in brilliant red, green or blue, stops all eyes. Letters are strong and tough — practically unbreakable. The new 17" *"Lok-Lip"* Plastic SAFETY LETTERS are *self-locking* on the frames—cannot fall off or blow off, regardless of wind or weather. Used interchangeably with 10" Plastic and 8"-10"-12"-16"-24" Cast Aluminum letters, all on the same frames.

NEW 17" "Lok-Lip" (TRADE MARK) PLASTIC SAFETY LETTER 2-TONE "THIRD DIMENSION"

ADLER *Patented* "REMOVA-PANEL"

FILL LARGE OPENINGS OF **ANY HEIGHT OR LENGTH** WITHOUT DIVIDER BARS. PERMIT ALL MAINTENANCE ANYWHERE IN THE SIGN THROUGH "REMOVA-PANELS" **WITHOUT REMOVING FRAMES.**

For Theatre Marquee or Drive-In Signs—Write for Free Catalog

ADLER SILHOUETTE LETTER CO.

3021 b West 36th St., Chicago 32 — 1451 b Broadway, New York 18

CHICAGO . . NEW YORK . . TORONTO, CANADA . . LONDON, ENGLAND

Covered by Patents Granted and Pending. Approved by Underwriters' Lab., Inc.

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market data

FOR DEALERS INDICATED BY NUMBER, SEE LISTING ON PAGE 6.

Air Supply & Conditioning

AIR DEVICES, INC., 17 East 42nd St., New York 17, N. Y.

Air filters, diffusers, exhausters.

DIFFUSERS, Square or rectangular: Available in their basic types and a variety of vane arrangements, patterns and sizes. **Type R** is for surface mounting; **Type RV** for mounting on exposed ducts; **Type RTC** for flush mounting in acoustically treated ceilings, fitting flush with acoustic tiles of standard sizes. All types have units of stamped steel, spot welded for rigidity, and are finished in baked enamel lacquer. They can be assembled in many vane arrangements for diffusion in one, two, three or four directions.

DIFFUSERS, Circular: Fabricated of spun aluminum in a variety of sizes for flush or suspended mounting. Available for combination supply and recirculation; also for combination with built-in light sources. Finished in baked aluminum lacquer.

FILTERS (TYPE FM "Agitair"): Permanent cleanable viscous type with filtering media consisting in layers of expanded metal to stop and hold dust for long periods of time.

EXHAUSTERS: Wind-actuated for general ventilating exhausting service. Constructed of heavy-gauge steel with corrosion-resistant finish. Wide "venturi-type" orifices for maximum exhaust efficiency. Designed for positive elimination of down draft. Weatherproof.

DOMESTIC DISTRIBUTION: Authorized dealers in heating and ventilating industry.

Cable Address: AIRDEVICES.

ANEMOSTAT CORP. OF AMERICA, 10 East 39th St., New York, N. Y.

Air diffusers.

ASPIRATING TYPE OUTLETS ("Anemostats") in ceiling and wall models for flush or projected mounting, frabricated for assembly according to air volume and adjustable directionally; line includes model for frequent air change with low velocity **(AR)**; for use with **unit heater (HU)**; combination supply and exhaust **(AC)**; supply with adjustable flow pattern **(C-1)**; combination diffuser and cove light **(CSL)**; combination diffuser and globe light **(NL-1)**; flush-mounted ceiling supply **(C)**; wall supply **(W)**.

DOMESTIC DISTRIBUTION: Air-conditioning contractors.

GENERAL ELECTRIC CO., Air-Conditioning Dept., Bloomfield, N. J.

Mechanical refrigeration equipment, evaporative condensers, boilers.

TYPE FD UNIT CONDITIONERS: Self-contained cooling equipment for direct space or duct conditioning; include heating with addition of suitable coils. Type FD-100D, 10 tons; FD-75D, 7½ tons; FD-50D, 5 tons; also 2 and 3 tons.

TYPE HD CENTRAL STATION CONDITIONERS: Horizontal (HDH) and vertical (HDV) models; provide both cooling and heating; five basic frame sizes in each type; cooling range 0.8 to 58 tons; heating range 28,100-1,310,000 Btu's per hr.; flexible design for space accommodation.

TYPE CM CONDENSING UNITS: Cap. range from small room to building requirements. Max. single-unit rating 60 h.p.

TYPE LM BOILERS: Gas-fired for steam, vapor, hot water or radiant heating; eight sizes from 76,800 to 345,000 Btu's per hr.; single or multiple installations.

TYPE LA BOILERS: Oil-fired for all types of heating; six sizes from 75,000 to 450,000 Btu's per hr.

DOMESTIC DISTRIBUTION: Authorized air-conditioning dealers.

Cable Address: INGENETRIC. **EXPORT:** International General Electric Co., 570 Lexington Ave., New York.

McQUAY, INC., 1600 Broadway, N. E., Minneapolis 3, Minn.

Unit Air Conditioners, heat transfer coils.

CENTRAL STATION AIR CONDITIONERS: Cooling capacities from 3 to 50 tons per unit; either vertical or horizontal space styles in each of 8 capacities (vert. max. space 50 in. deep, 108 in. wide, 117 in. high; hor. max. 110 in. deep, 113 in. wide, 50 in. high). Equipped for water or direct expansion cooling; ripple fin steam coils and humidifier available for heating. Other optional accessories —throwaway or cleanable filters, face and by-pass section, mixing boxes.

HEAT TRANSFER COILS: All types and sizes for heating, cooling; direct expansion coils for cooling; special coils of various materials. On all standard ripple fin coils, secondary surface is of aluminum ripple fin continuous plate type; primary surface, the tubes are electrotin plated for further protection and longer life.

DOMESTIC DISTRIBUTION: Authorized dealers in heating and ventilating field.

Cable Address: MCQUAY. **EXPORT:** Home office.

TYPHOON AIR CONDITIONING CO., INC., 794 Union St., Brooklyn, N. Y.

Unit air-conditioners, evaorative condensers, boilers, heat transfer surfaces (for theatres to 2,500 seats).

UNIT CONDITIONEDS: Self-contained free-standing units with mechanical refrigeration, crackle-finish steel exterior, in 9 cooling capacities, 1½, 2, 3, 5, 7½, 8, 10, 15 and 20 tons. Sizes from 1½-3 ton console cabinet, 21 3/16" x 35¼", 57" high, to 15-20 ton cabinet, 33" x 62", 95" high. Weights from 689 lb. for 1½ ton console to 2877 lb. for 20 ton model.

EVAPORATIVE CONDENSERS: Compact cabinets, capacities 3, 5, 8, 10, 15 and 20 tons to match all Typhoon air-conditioner sizes, for Freon and other standard refrigerants. **Model EC3,** nominal rating 3 tnos; fan 900 cfm; fan motor ⅓ h.p.; pump motor ¼ h.p.; dim 24x42x71, wt. 550 lb. **Model EC 20,** 20 tons (nominal); fan 6000 cfm; fan motor 1½ h.p.; pump ⅓ h.p.; dim. 33x76x76½ in.; wt. 1350 lb. Other sizes in proportion to capacities.

HEATING EQUIPMENT: Water and steam coils to fit any capacity Typhoon package air-conditioner, same all-copper construction and large prime surface used in cooling coils. Boilers for all sizes Typhoon conditioners.

(ALSO SEE OPPOSITE PAGE)

DOMESTIC DISTRIBUTION: Through RCA Theatre Equipment Supply Dealers (marked with asterisk, page 6) in most localities; others through authorized Typhoon air conditioning equipment dealers (name for specific territory available from anmufacturer).

Cable Address: TYPHOON. **EXPORT AGENT:** Douglas Fraser, Typhoon Export Corp., 794 Union St., Brooklyn, N. Y.

U. S. AIR CONDITIONING CORP., 33rd and Como Ave., S.E., Minneapolis, Minn.

Unit air-conditioners, heat transfer coils, unit heaters, evaporative condensers, fans, air washers.

UNIT CONDITIONERS: Complete cooling plants in attractive casing designed for convenient servicing.

UNIT CONDITIONERS: "Kooler-Aire" line of complete steel-encased cooling plants with mechanical refrigeration **(Models RK 3 to 40)** in 9 cooling capacities—3, 5, 7½, 10, 15, 20, 25, 30, 40 tons; evaporative condenser, thermal overload protection; max. dimensions (40 tons) 150½ in. wide, 60¾ in. high; shippable in sections for limited openings. **Models RKW** in same capacities for well water or cooling tower applications. **Models RKC** with water chiller for cold well water air-conditioning. **Models RKCW** with evaporative water chillers, wtaer-cooled shell and time condenser for remote air-conditioning applications.

Heating coils and humidifier available for either series (Catalog 65).

FANS AND BLOWERS: Single- and double-inlet types in all sizes, backward and forward curve fans, with standard discharge available; applicable to simple ventilation or with air washers or to any requirements for moving large volumes of air per hr. at slow speed.

HEATING EQUIPMENT: Water and steam coils; suspended type unit heaters for steam or hot water, 33,000 to 276,000 Btu's; gas-fired unit heaters, 55,000 to 400,000 Btu's per hour; in cast iron or sheet steel heater exchange models, also in models for duct or simple ventilation (blower) system installation (Bulletins 20, 23, 71).

COILS: For water or direct expansion (Freon or methyl chloride) cooling; depths 1 to 8 rows of tubes, 11 standard header and tube lengths 1 to 10 ft. (Bulletins 67C (water), 69C (dir. exp.)).

EVAPORATIVE CONDENSERS: 15 sizes, 3 to 100 tons capacity, for Freon and other standard refrigerants.

EVAPORATIVE CONDENSERS: 15 sizes (Type EC), 3 to 100 tons capacity, for Freon and other standard refrigerants; also especially compact model (Type R) for Freon cooling plants; 9 sizes in same tonnage ratings as unit conditioners above (Bulletin 87).

EVAPORATIVE COOLERS: "De-Hu-Matic" series with zoned controlled evaporation. "Kooler-Aire" units with gyro-spray for more e..cient evaporative cooling. "Kold-Aire" units for stricter economy.

STEEL CONDITIONERS: Packaged units ni 3, 5, 7½ ton cap. refrigeration; designed for direct space cooling.

AIR WASHERS: Two general types — **Gyro-Spray Double Mat Type:** Six models **(MW Series)** from 5,000 to 40,000 cfm., wts. 200 to 900 lbs. (Bulletin 58); single- and double-stage types, each in 15 cfm. capacities 2,500 to 100,000. Single-stage designed for cooling effect, double stage for combination cooling and dehumidification.

ROOM CONDITIONERS: Console Model, ¾ and 1 ton; **Window Model,** ½ ton and ¾ ton models available. **DOMESTIC DISTRIBUTION:** Authorized theatre supply and air-conditioning equipment dealers.

Cable Address: USAIRCO. **EXPORT AGENT:** N. Balagurchik, 420 Lexington Ave., New York 17.

UMI

Architectural Materials, Design & Interior Decoration Service

CHICOPEE MANUFACTURING CO., Lumite Division, 47 Worth St., New York, N. Y.
Wall covering and drapery fabric of woven plastic filament.

LUMITE WOVEN SARAN FABRICS: Lumite fabric may be applied to walls by approved conventional methods, or suspended as a curtain or back-drop; will gather into folds, particularly for fixed draping. Available in both large- and small-scale patterns in a variety of colors (colors permanently dyed into filaments).

DOMESTIC DISTRIBUTION: Direct.

Cable Address: CHICOPEE. **EXPORT:** Firm export dept.

F & Y BUILDING SERVICE, 319 E. Town St., Columbus 15, Ohio.

Theatre design and construction.

ARCHITECTURAL AND CONSTRUCTION SERVICE includes complete planning and contracting.

(ALSO SEE PAGE 62)

KNOXVILLE SCENIC STUDIOS, INC., 611 Phillips Ave., Knoxville 4, Tenn.

Interior Decoration and Stage Installations.

DECORATION SERVICE: Design, decorative and mural painting, black-light decoration, Fiberglas ceilings, wall fabrics.

STAGE INSTALLATIONS: Curtains and track and control equipment, draperies, lighting, hardware, rigging, cycloramas.

(ALSO SEE PAGE 47)

DISTRIBUTION AND SERVICE CONTRACTS: Direct, or through theatre supply dealers.

EXPORT: Knoxville Scenic Studios, Old Maryville Pike, Box 1029, Knoxville, Tenn.

MARSH WALL PRODUCTS, INC., Dover, Ohio.
Plastic-finished paneling, mouldings, adhesives.

"MARLITE" PANELING: Plastic in colors and various texture and grain finishes integrated to Masonite Presdwood, available in full range of standard colors and related shades in the **"Velvetex"** satin finish; also with addition of black in the **"Deluxe"** high-gloss finish; in solid colors, or scored horizontally (**"Horizontaline"**) or 4-in. squares **(Tile Pattern)** in white or harmonizing color. Standard sizes (in ft.) 4x4, 4x5, 4x6, 4x8, 4x12 (except tile). Thickness ⅛ in.

"MARLITE" WOOD AND MARBLE PATTERNS: Reproductions of walnut, striped mahogany, rift oak, gray prima vera, natural prima vera; 4x6, 4x8; 8-ft. muoldings grained to match in Presdwood, aluminum alloy, or plastic. Marble reproductions in Verdi Antique Black and Gold, Rose de Brignoles, Jaune Benou, Skyros; 2⅔x4, 4x8; 8-ft. Presdwood mouldings to match.

WALLBOARD INSTALLATION MOULDINGS: Aluminum alloy in all forms, white; Presdwood in black (other colors on special order) with scoring; plastic in all essential forms, in white, cream, Persian red, gray, black, green, yellow, coral, light blue.

ADHESIVES: For waterproof bonding of wallboard, glass, insulation, metal, plywood; C-200 quality in 1- and 5-gal. cans; C-300 rubber-base type in quart and 1- and 5-gal. cans.

WASHROOM ACCESSORIES: Die-cast, copper-plated and chrome-finished soap holders, towel bars, hooks, etc.

DOMESTIC DISTRIBUTION: Building supply dealers through U. S.
EXPORT AGENT: Lawrence & Erausquin, 1902 Jefferson St., Toledo 2, Ohio.

MOSAIC TILE CO., Zanesville, Ohio.
Floor and wall tiles.

WALL TILE: Satin Mat glazed, bright, **Enamel, "Harmonitone"** tiles.

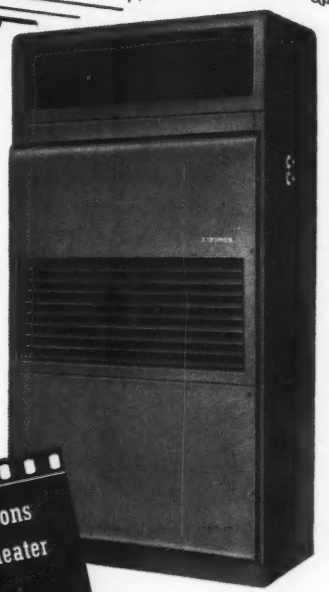
FLOOR TILE: Ceramic mosaics, unglazed; **Quarry** tile, **Faience** tiles.

BRANCHES: 101 Park Ave., New York 17; 4143 W. Armitage Ave., Chicago 39; 112 Kenilworth, Detroit 2; 5224 Santa Monica Blvd., Hollywood 27; 165 Mississippi St., San Francisco 10.

DISTRIBUTION: Tiling contractors.

Cable Address: MOTILE.

The line forms to the right — and keeps on forming right through the summer — when that "Air Conditioned by Typhoon" banner goes up. Yes, you can multiply your ticket sales in hot weather with modern, packaged air conditioners. So easy to install, Typhoon units can be at work for you in short order . . . so low in cost they save you 25% of the money you figured for a central plant system. Serving the motion picture industry for 40 years, Typhoon has a practical, economical air conditioning plan for your theater. Write us today.



Bring Your Patrons An Open-Air Theater Indoors

Now in 1½ to 20 ton sizes —FOR EVERY SIZE THEATER FROM 250 to 2500 SEATS

TYPHOON
Packaged Units
8 WAYS BETTER

1. **CHEAPER TO BUY:** Up to 25% lower dollar cost than central plant system.
2. **CHEAPER TO OPERATE:** No waste cooling of upper area, no loss in ducts. Thermostats turn off individual units when not needed..
3. **FASTER TO INSTALL:** Can be in operation within 5 days...no walls to tear down, no ducts to build.
4. **ZONE CONTROL:** Individual thermostats give even temperature throughout the house.
5. **SUPPLEMENTS YOUR PRESENT SYSTEM:** Units can serve as additions to central cooling plant, when more air conditioning is required.
6. **WRINGS OUT MOISTURE** in addition to cooling, filtering and circulating... complete air conditioning in summer, with heating coils optional for winter use.
7. **RUGGEDLY ENGINEERED:** Over-size parts insure full-rated capacity under toughest conditions...factory tested features add up to trouble-free performance.
8. **QUIET OPERATION:** Sound baffled cabinet, low speed compressor and floating spring base eliminate noise, vibration.

Write for "The Inside Story of Air Conditioning" to Dept. TM 2

TYPHOON AIR CONDITIONING CO., INC.
794 UNION STREET, BROOKLYN 15, N. Y.

Distributed in most territories by RCA Theatre Supply Dealers.*
*In New York, New Jersey, Massachusetts, Michigan, Louisiana by other authorized Typhoon dealers

NOVELTY SCENIC STUDIOS, INC., 32 West 60th St., New York, N. Y.
Interior decoration.

INTERIOR DECORATION DESIGN, PAINTING & DRAPING, including supply and installation of wall fabrics and stage curtains and drapes; murals.

(ALSO SEE PAGE 64)

POBLOCKI & SONS, 2159 S. Kinnickinnic Ave., Milwaukee, Wis.
Front materials including doors, box-offices. Plans for prefabricated theatres. (See also listing under attraction Advertising Equipment and Marquees.)

FRONT AND ENTRANCE FINISHING MATERIALS: Porcelain enamel facing members manufactured to specification and shipped for erection by local labor; with or without related components, including box-office, display frames, marquee and attraction panels, theatre name sign, etc.

PREFABRICATED THEATRES: Plans (and front materials as noted above) for Quonset type prefabricated construction.

(ALSO SEE PAGE 44)

DOMESTIC DISTRIBUTION: All theatre supply dealers, and direct.

SWITZER BROTHERS, INC., 4732 Clair Ave., Cleveland 3, Ohio.
Black-light equipment, luminescent paints and murals.

"GLO-CRAFT" BLACK LIGHT EQUIPMENT: Model 88, 250w recess-mounting unit (fits between 16-in. joints), adjustable up to 45° angle for lighting wall murals; ship. wt. 27¾ lbs. **Model 80,** 250w bracket-mounting unit (may be suspended by cable for occasional use); ship. wt. 27¾ lbs. **Model 103,** 100w bracket unit streamline style for exposed locations; rated effective for areas not exceeding 30 sq. ft.

"GLO-CRAFT" MURALS: Series of marine and floral subjects painted in luminescent colors, 9 ft. wide, 14 ft. high, complete with necessary black-light sources.

"GLO-CRAFT" PAINTS: Luminescent lacquer-enamel for any surface, 12 colors; luminescent **water colors** for any white surface, 12 colors.

DOMESTIC DISTRIBUTION. All theatre supply dealers, except murals direct.

THORTEL FIREPROOF FABRIC INC., 101 Park Ave., New York 17, N. Y.
Fabrics woven of Fiberglas.

NON-COMBUSTIBLE DECORATIVE FABRICS woven entirely of glass yarns, adapted to auditorium walls and stage draping in heavy-duty weights; also available in sheer qualities for room hangings; wide range of printed patterns in extensive variety of color schemes.

PRINCIPAL REPRESENTATIVES: Wilfred B. Keenan, 18 Tremont St., Boston, Charles H. Johnstone, 131 N. Robertson Blvd., Los Angles, and 251 Post St., San Francisco.

Attraction Advertising Equipment & Marquees

ADLER SILHOUETTE LETTER CO., 3021 West 36th Street, Chicago 32, Ill.
Changeable letters and supporting frames for marquee and drive-in signs, and commercial changeable signs.

SILHOUETTE LETTERS: Cast aluminum with recessed face and reflecting bevels ("Third Dimension") in many popular combinations. Sizes 8, 10, 12, 16 and 24 inches used interchangeably on Adler frames, and interchangeable with Adler **Plastic** letters. Also available in 4-inch and 6-inch letters for interlinear mounting, as in word units ("The," "and," etc.).

PLASTIC LETTERS: Molded of durable translucent plastic with solid triangular bevels and mounting means integrally molded on body of letter; available in permanent red, green, blue and other colors in two-tone plastic. Sizes 10 and 17 inches, interchangeable with Adler **Aluminum Silhouette** letters on Adler frames. New 17" "Lok-Lip" plastic **Safety Letter** is self-locking on frames—cannot fall off or blow off the sign regardless of wind or weather.

SUPPORTING FRAMES: These are available with patented stainless steel "Remova-Panel" feature to fill large openings **of any height or length** without divider bars, permitting cleaning, repairs and lamp replacement through small lightweight sections of the panel **without removing frames. Regular stainless steel "Glass-in-Frame" units** also furnished; in these, every other unit is made removable for maintenance.

Branches: 1451 Broadway, New York, N. Y.: Toronto, Ont., Canada; London, England.

(ALSO SEE PAGE 59)

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Cable Address: ADLERCO

POBLOCKI & SONS, 2159 S. Kinnickinnic Ave., Milwaukee, Wis.
Poster cases, marquees.

POSTER CASES: Stainless steel, surface or recessed type, with or without illumination; also easel, curved and show-window models. Extruded aluminum in same styles, natural finish or color.

MARQUEES: Fabricated to specifications; regular, or designed for letter and lamp changing and other servicing from storage room inside marquee; inside service type with special reflector lamping; both available in enamel or painted finish.

(ALSO SEE PAGE 44)

DOMESTIC DISTRIBUTION: All theatre supply dealers, or direct.

THEATRES SPECIALTIES, INC., 1615 Gordova St., Los Angeles 7, Calif.
Attraction signs and changeable letters, display frames, door hardware.

SIGN PANELS AND LETTERS: Panels of sectional design with Plexiglass and aluminum mounting bars. Letters all-plastic of shaded bevel effect in red, green, blue, black; integrated plastic lug mounting; sizes 4, 8, 10, 12, 17 inches.

DISPLAY FRAMES: Standard and Deluxe Models of alumilited aluminum with extruded aluminum poster holders; for posters 40x80, 40x60, 30x40, 27x41. **Deluxe** has special light-focusing shielding provisions. **Both** available for surface or recessed mounting. **Aluminum photo cases,** Standard and Deluxe, 27¼x70, 28¼x71; and aluminum **insert frames,** 3x10, 3x14, 4x14, 8x10, 11x14, 14x22, 14x36, 24x24, 22x28, 27x41, 30x40.

Door hardware of alumilited aluminum includes push bars in a variety of styles, push and kick plates, pull bars and thresholds.

DOMESTIC DISTRIBUTION: National Theatre Supply branches.

EXPORT: National Theatre Supply, Export Dept., 92 Gold St., New York.

WAGNER SIGN SERVICE, INC., 218 S. Hoyne Ave., Chicago 12, Ill.
Changeable letters and supporting frames panels for marquee and drive-in signs, and commercial changeable signs.

FRAMES: Stainless steel construction, in standard and in window type of sectional design for convenient servicing.

(ALSO SEE PAGE 27)

PLASTIC LETTERS: Adjustable for firm fit and for sliding on bar; in black and translucent red, green, blue, amber; sizes 4, 6, 8, 10, 17 inches; slotted mounting.

Auditorium Chairs & Seating Fabrics

AMERICAN SEATING CO., 901 Broadway, N.W., Grand Rapids 2, Mich.
Auditorium chairs.

MODEL NO. 20-001 (Bodiform Retractor): Similar to Bodiform Series, but equipped with smooth silent retracting seat, mechanism completely shielded. Comes with No. 128 end standard, lyre type design relieved by decorative aisle-light cover.

MODEL NO. 16-001 ("Bodiform" Series): The "Bodiform" group has steel back and seat with self-rising seat (¾ fold action) of spring-arch construction, and concealed, self-adapting hinges. The **16-001** has full-length padded back; other backs available include short, padded type **(16-501,** especially suited to stadiums and balconies); and **16-040** steel pan, spring back. Upholstery fabric attached by tackless clincher method. **End standards** of three streamlined syles, one **(123)** in moulded vertical flutings, another **(No. 117)** a smooth surface relieved by a central tier of moulded rings. The third **(No. 129)** has multiple-lyre shaped mouldings, highlighted by three contrasting louvres. All available with or without aislelite.

MODEL NO. 16-004: In general design similar to "Bodiform" group, but with metal-clad wood veneer back (edged with extruded aluminum channel moulding forced into wood under hydraulic pressure). The **16-870** is model with "deluxe" full-spring back, available with or without aluminum moulding.

MODEL NO. 14-501 ("Zenith" Series): Of streamlined design adapted to either No. 123 or No. 117 end standard; padded steel back, seat of spring-arch construction with soft front; tackless fabric attachment.

MODEL NO. 11-152: Back and seat of 5-ply wood veneer; ball-bearing hinges. **End standard** especially designed for it **(No. 139)** of straight vertical lines in Georgian Colonial pattern (without aislelite).

(ALSO SEE PAGE 5)

DIVISION OFFICES: 1776 Broadway, New York 19; 131 Clarendon St., Boston 16; 173 W. Madison St., Chicago 2; 56 Glenwood Ave., Minneapolis 3; 2631 Woodward Ave., Detroit 1; Elyria Savings & Trust Bldg., Elyria, Ohio; 2128 Payne Ave., Cleveland 14.

BRANCHES (principal): 935 W. Genesee St., Syracuse 4, N. Y.; 2930 Canton St., Dallas 1; 354 Nelson St., S. W., Atlanta 3; 1815 Twenty-ninth Ave., S., Birmingham 9; 900 S. Main St., Jacksonville 7, Fla.; 207 S. Van Ness Ave., San Francisco 3; 6900 Avalon Blvd., Los Angeles 3.

DOMESTIC DISTRIBUTION: Above offices and NTS.

EXPORT: Amer. Seating Co., Export Dept., 1776 Broadway, New York 19; National Theatre Supply, Export Dept., 92 Gold St., New York 7.

CHICAGO EXPANSION BOLT CO., 1338 W. Concord Place, Chicago 22, Ill.
Auditorium chair anchors.

"SUPREME" EXPANSION BOLTS: Long sleeve type (⅞-inch) to insure maximum anchoring power in concrete or other masonry; supplied with steel cone; available in full range of sizes to meet reseating as well as new floor conditions.

"SUPERIOR" EXPANSION BOLTS: Same as "Supreme" except for cone of metal alloy instead of steel.

The F & Y Building Service is the outstanding agency in Theatre Design and Construction in Ohio and surrounding territory.

THE F & Y BUILDING SERVICE
319 East Town Street — Columbus 15, Ohio
"The Buildings We Build Build Our Business"

"STANDARD" EXPANSION BOLTS: A short sleeve type with alloy cone.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

CHICOPEE MANUFACTURING CORP. of Ga., Lumite Division, 47 Worth St., New York, N. Y.

Fabrics woven of plastic filament.

LUMITE WOVEN SARAN FABRICS: "Saran" is plastic "thread" or filament, and fabric woven of it is highly durable and readily cleaned by merely wiping with damp, soapy cloth or cleaning fluid; it is also non-inflammable and vermin-repellent. Available in a variety of patterns and colors (color is a filament-dyed, not printed, and is permanent). Weave provides qualities of coolness, dryness, absence of wrinkles.

DOMESTIC DISTRIBUTION: Direct and through manufacturers of auditorium chairs.

(ALSO SEE PAGE 19)

Cable Address: CHICOPEE. **EXPORT:** Firm export dept.

E. I. DuPONT de NEMOURS & CO., INC., Fabrics Div., 350 Fifth Ave., New York 1, N. Y.

Coated fabrics.

"FABRILITE": Vinyl base type coating on cotton fabric, in a variety of simulated leather effects, in all standard colors and many related shades.

"FABRIKOID": Pyroxylin type coating on cotton fabric for applications not requiring quality of vinyl base coatings; simulated leather finishes in standard colors.

DOMESTIC DISTRIBUTION: Authorized dealers in upholstery field.

Cable Address: FABRIKOID. **EXPORT:** Company export dept., N. Y.

FENSIN SEATING CO., 1143 S. Wabash Ave., Chicago 5, Ill.

Auditorium seating service and parts: anchor cement, cushion repair materials.

REPAIR SERVICE: Parts fabricated to specification, cushions reconditioned, reupholstering fabrics supplied Within 1000 miles of Chicago seating service available, including labor and supplies for installation or maintenance.

ANCHOR CEMENT: "Permastone" for permanently anchoring loose chairs in concrete.

CUSHION REPAIR FABRIC: "Patch-O-Seat" kit includes leahtrette type coated fabric and materials for applying to torn upholstery.

(ALSO SEE PAGE 74)

DOMESTIC DISTRIBUTION: All theatre supply dealers, and direct.

GOODALL FABRICS, INC., 525 Madison Ave., New York, N. Y.

Upholstery Fabrics.

PLAIN MOHAIRS; NOVELTY FRIEZE: Flat woven fabrics; all 54" full range of colors.

PLASTIC FABRICS: "Redo" line of vinyl-coated material, full range of colors and various "grain" finishes.

DRAPERY FABRICS: Hand printed and plain.

(ALSO SEE PAGE 10)

DOMESTIC DISTRIBUTORS: All theatre supply dealers.

GRIGGS EQUIPMENT CO., Box 630, Belton, Tex.

Auditorium chairs.

NO. 30 LINE: Steel construction, available with full metal or plywood backs; coil spring seats; steel tubular edge center.

NO. 20 LINE: Similar to No. 30, but with cushioned hinge, smooth seat pan.

NOS. 16 AND 12 LINES: Lower-priced group ranging from fully upholstered to veneer styles; all with steel tubular edge center.

(ALSO SEE ADJOINING COLUMN)

DOMESTIC DISTRIBUTION: Authorized theatre dealers (name for specific territory available from company on request).

EXPORT: Fally Markus, 1560 Broadway, New York, N. Y.

HEWITT-ROBINS, INC., HEWITT RESTFOAM DIV., 240 Kensington Ave., Buffalo 5, N. Y.

Foam rubber cushions.

"RESTFOAM" latex foam rubber cushioning fabricated to specifications for auditorium seating and foyer-lounge furniture.

BRANCHES: 370 Lexington Ave., New York 17; 1230 American Furniture Mart, Chicago, Ill.

HEYWOOD-WAKEFIELD CO., Gardner, Mass.

Auditorium chairs.

"ENCORE" LINE: No. TC-700, coil-spring seat, padded back, all-steel construction; No. TC-701, coil spring seat, spring-filled back, all-steel.

"AIRFLO" LINE: Patented "Rocking chair" action. TC 702 has spring-fillbed back, coil spring seat. No. TC 703 same, with spring-filled pillow headrest.

"MEDALIST (TC-704): Steel except for wood veneer back; coil spring seat.

"ARISTOCRAT" (TC 705): Steel frame, wood veneer back and seat.

(ALSO SEE PAGE 23)

BRANCHES & REPRESENTATIVES: 1 Park Ave., New York 16; 666 Lake Shore Dr., Chicago 11; 937 S. Alameda Blvd., Los Angeles 21; A. W. Chesley, Jr., 3 Arnoldale Rd., West Hartford, Conn.; N. C. King, 1907 St. Paul St., Baltimore; C. H. Rukas, 645 Fulton St., Medford, Mass.; J. G. Obey, 666 Lake Shore Dr., Chicago.

DOMESTIC DISTRIBUTION: Direct and Dealers 7, 11, 13, 25, 34, 57, 103, 104, 128.

EXPORT: N. Y. Branch, 1 Park Ave.; Frazar & Hansen, Ltd., 301 Clay St., San Francisco 11, Calif.

IDEAL SEATING CO., Grand Rapids, Mich.

Auditorium chairs.

"STREAMLINERS": Three models, two without self-raising seat ("Mercury" and "Challenger"; and "Chief," with self-raising seat having external tension adjustment. Die-cast steel backs and seat pans, coil spring seats, padded or spring backs optional.

"SLIDE-BACK" TYPE: Seat automatically slides back, rises and locks, back moving to vertical position, when occupant stands; action reversed when patron releases seat; steel construction, coil seat springs, spring or padded back optional.

(ALSO SEE PAGE 20)

DOMESTIC DISTRIBTION: Authorized theatre supply dealers (name for specific territory on request from manufacturer).

INTERNATIONAL SEAT CORP., Union City, Ind.

Auditorium chairs.

COIL SPRING MODELS: All steel except Model 101A, seven end standard styles. **Model 401A,** insert panel back, spring-edge seat; **101A,** back 7/16-in. veneer, lacquer finish, spring-edge seat; **301A,** padded back, wire-on fabric attachment, spring-edge seat; **201A.** padded veneer insert back, spring-edge seat; **350AH,** padded welted back, wire-on fabric attachment, spring-edge seat; 2,000 form-fitting long back, spring edge seat, modern or neo-classic end panels.

DOMESTIC DISTRIBUTION: Theatre Equipment Section, RCA-Victor Div., Camden, N. J., through dealers marked with asterisk, page 10.

EXPORT: Norpat sales, Inc., 45 West 45th St., N. Y. C., or Intl. Seat Corp., Union City, Indiana.

IRWIN SEATING CO., Grand Rapids, Mich.

Auditorium chairs.

COMET, NO. 4452: Steel construction, spring arch seat.

STANDARD GROUP: Steel construction. **No. 3342,** coil spring seat, padded back; **No. 2241,** coil spring seat, plywood back; **No. 1141,** plywood back and seat.

(ALSO SEE PAGE 25)

DOMESTIC DISTRIBUTION: Authorized theatre supply dealers (numbers refer to list on page 6)—13, 21, 23, 37, 39, 45, 52, 58, 62, 89, 105, 110, 116, 119.

KROEHLER MFG. CO., Naperville, Ill.

Auditorium chairs.

AUDITORIUM SEATING: Steel construction with push-back seat in all models; seats full coil spring; choice of end standards in modern styles. **Model 110½,** padded back; **Model 115,** spring back; **Model 116,** loge type with high lounge full spring back.

DOMESTIC DISTRIBUTION: Direct.

(ALSO SEE PAGE 13)

EXPORT: Kroehler Mfg. Co., 666 Lake Shore Drive, Chicago, Ill.

TEXTILEATHER CORP., Toledo, Ohio.

Coated fabrics.

Standard finishes and colors in vinyl resin plastic base type, and in **proxylin grade.**

DOMESTIC DISTRIBUTION: Authorized dealers in upholstery field.

BRANCHES (principal): 108 E. 18th St., New York; 80 E. Jackson Blvd., Chicago; Fisher Bldg., Detroit; 406 S. Main, Los Angeles; 317 N. 11th St., St. Louis; 1310 South Main St., High Point, North Carolina; 3751 Prospect Ave., Cleveland 15; 330 S. Wells St., Room 714, Chicago 6; 1110 Texas Bank Building, Dallas 2; 712 Haas-Howell Building, Atlanta 1.

U. S. RUBBER CO., Coated Fabrics Department, Mishawaka, Ind.

Upholstery fabrics.

U. S. NAUGAHYDE: Plastic upholstery, with or without a fabric backing. Made in a wide range of weights, finishes and decorator colors for all upholstery and trim applications.

DOMESTIC DISTRIBUTION: Authorized dealers in upholstery field.

EXPORT: U. S. Rubber Export, Ltd., 1230 Avenue of the Americas, New York 20.

[*For Box-Office Equipment see Ticket Sales*]

A FINE CHAIR FOR FINE THEATRES
the new GRIGGS 30-line chair

★ Self-rising seat. ★ Finest in materials and workmanship.

Call, Wire or Write for Sample

Griggs EQUIPMENT COMPANY
Belton, Texas

Offices: Dallas, Memphis, Shreveport, Oklahoma City and New York City

Drive-In Theatre Equipment

For projection, sound, ticket booth, attraction advertising equipment, see those divisions (Index page 4).

AMERICAN SEATING CO., Ninth & Broadway, Grand Rapids, Mich.

Drive-in stadium seating.

NO. 44 FOLDING CHAIR: Tubular steel construction in rigid "Y" design; plywood contour seat and back rest; metal finished in baked enamel, plywood lacquered; rubber feet.

DOMESTIC DISTRIBUTION: National Theatre Supply branches, and direct.
EXPORT: National Theatre Supply, International Div., 92 Gold St., New York.

AUTOCRAT, INC., 2227 Hepburn Ave., Dayton 6, Ohio.

In-car speakers, ramp speaker and light controls, refreshment vending car.

IN-CAR SPEAKERS: Aluminum model, speaker and termina! housing natural cast aluminum, straight cords. **Steel model,** speaker housing pressed steel with baked auto finish, terminal housing natural cast aluminum, straight cords. Koiled Kords, ramp and concession lights, speaker cradles available in either model. **Special models** on order; also **post models, all-steel styles,** and similar speakers for other space sound purposes.

RAMP SPEAKER CONTROL: Switch panel for automatic cutoff of any ramp section due to shorts, etc.; **available** for any car capacity.

RAMP LIGHT CONTROL: Panel for control of post downlights in speaker hookups; available for any car capacity; adapted to all installations.

VENDING CAR: Crosley automobile chassis fitted with refreshment vending body; for hot and cold drinks and foods; mechanical refrigeration; drink dispenser unit with automatic carbonator.

DOMESTIC DISTRIBUTION: Authorized theatre supply dealers (numbers refer to lis ton page 6)—1, 3, 6, 10, 19, 22, 29, 40, 41, 45, 53, 58, 60, 64, 69, 72, 78, 82, 85, 87, 88, 96, 100, 105, 111, 113, 116, 117, 124, 129, 130.

EXPORT: Westrex, Inc., 111 Eighth Ave., New York.

DRIVE-IN THEATRE EQUIPMENT CO., INC., 2110 Superior Ave., Cleveland 14, Ohio.

In-car speakers, in-car heater, ramp indicators, amplifiers.

The New Look

IN YOUR THEATER MEANS

Bigger Boxoffice

Send your rough sketches or plans for free estimate & color rendering

Wall Coverings ● Painting ● Ornament Plaques
● Luminaries ● Stage Curtains ● Curtain Tracks
● Curtain Controls ● Draperies ● Tufted Panels
NOVELTY
SCENIC STUDIOS, INC.
32-34 W. 60th ST., N.Y. 23, N.Y.
Masters of the Art of Decoration

IN-CAR SPEAKERS: Two models, with or without post illumination; deluxe model of cast aluminum with "talk back" system for ordering refreshments from concession building.

IN-CAR HEATERS: 500-watt (1700 BTU).

(ALSO SEE PAGE 31)

DOMESTIC DISTRIBUTION: Authorized dealers (name for specific territory on request from manufacturer).

Cable Address: NORPACREST, New York. **EXPORT:** Noysat Sales, Inc., 95 West 45th St., New York 19, N. Y.

ELIZABETH IRON WORKS, Green Lane, Elizabeth, N. J.

Prefabricated steel screen towers.

SINGLE SCREEN: Three models of steel rigid frame and plate welded construction, each with servicing walkway spanning top. Models by screen sizes—**S38,** screen 38x49 ft.; **S-44,** 44x60; **S-52,** 52x72. Leg section heights 17 to 21 ft.

TWIN SCREEN: Screen on each side, 44x60 ft.; same basic construction as single-screen models.

DISTRIBUTION: Direct.

GENERAL ELECTRIC CO., Electronics Park, Syracuse, N. Y.

Speaker units for in-car reproducers.

MODEL S40C22: Aluminum base PM voice coil, moisture-resistant cone designed to prevent warpage, gasket of non-absorptive cork to insure correct position of speaker in housing, special treatment of metal parts for outdoor protection; 4-in., output 4w, coil impedance 3.2 ohms, magnet wt. 1.3 ozs.

MODEL S525C8: Same as above except 5¼-in.

(ALSO SEE PAGE 27)

BRANCHES: 187 Spring St. N.W., Atlanta 3; 140 Federal St., Boston 1; 1122 Merchandise Mart, Chicago 54; 215 W. 3rd St., Cincinnati 2; 710 Williamson Bldg., Cleveland 14; 901 Ross Ave., Dallas 2; 650 17th St., Denver 2; 3637 Book Tower Bldg., Detroit 2; 106 W. 14th St., Kansas City 6; 530 W. Sixth St., Los Angeles 54; 12 Sixth St., Minneapolis 2; 570 Lexington Ave., New York 22; 1405 Locust St., Philadelphia 2; 200 S. Main St., Salt Lake City 9; 235 Montgomery St., San Francisco 6; 710 Second Ave., Seattle 4; 806 Fifteenth St., N. W., Washington 5.

GRIGGS EQUIPMENT CO., Box 630, Belton, Tex.

Drive-in stadium seating.

Model 10S OUTDOOR CHAIR: Stationary type, steel channel construction, baked finish; contour metal hinged seat, slatted back.

DOMESTIC DISTRIBUTION: Authorized theatre dealers (name for specific territory available from company on request).

EXPORT: Fally Markus, 1560 Broadway, New York, N. Y.

HILL'S PLAYGROUND EQUIPMENT CO., Grand Prairie, Tex.

Recreational equipment for children.

KIDDIE SLIDE: Designed in form of elephant, gaily painted, stair through back, 8-ft. slide down "trunk"; body 6 ft. long, 5 ft. high; canopy over. Wt. 500 lbs.

BENCH SWING: Lawn type two-seat, all metal operating on ball bearings; covers area 4x5½ ft.; wt. 125 lbs.

CHAIN SWING: Two swings on metal tubular frame; chain suspension operates on bearings. Frame leg spread 9 ft.; ht. 9 ft.; wt. 100 lbs.

MERRY-GO-ROUNDS: Heavy-duty model, diam. 14 ft., cap. 50 children, central post 5-in. pipe, arms 1¼-in. pipe, seats yellow pine, wt. 650 lbs.; smaller model same except diam. 8 ft., central post 2-in. inside 2½-in. pipe, wt. 250 lbs.

DOMESTIC DISTRIBUTION: Direct.

IDEAL SEATING CO., Grand Rapids, Mich.

Drive-in stadium seating.

STATIONARY CHAIR for attachment to flat or inclined floor, indoor or outdoor; cast grey iron standards, slatted wood seat and back; silent direct-attached ball bearing seat hinges; available with wood slats either natural or enamel finish.

DOMESTIC DISTRIBUTION:

EXPORT: Joe Hornstein, Inc., 630 Ninth Ave., New York City.

KING AMUSEMENT CO., 82 Orchard St., Mt. Clemens, Mich.

Playground equipment.

AIRPLANE RIDE: Five chrome-trimmed planes, cap. each 2 children; suspended from steel tower, traverse 25-foot circles; automatic clutch button-controlled.

ROCKET RIDE: Five rocket-type planes, cap. each 4 children; otherwise as above.
SPEEDBOAT RIDE: Five miniature speedboats, cap. each 5 children; powered by electric motor, operate in 18-foot tank.

MINIATURE TRAINS: Electric and gasoline models, track sizes and designs built to order.

PONY-AND-CART RIDE: Eight cast aluminum ponies that gallop, pulling miniature carts, cap. 2 children; all enclosed in canvas top and wall; electric motor operation with push-button clutch.

FIRE ENGINE RIDE: Eight red fire engines with bell; total cap. 16 children; electric motor operation with push-button clutch.

ELEPHANT RIDE: Ten miniature cars shaped like elephant, cap. each 2 children; cars attached to central pole; electric motor operai twonith push-button clutch.

(ALSO SEE PAGE 74)

DOMESTIC DISTRIBUTION: Direct.
EXPORT: Home office.

KOILED KORDS, INC., Box K, Hamden, Conn

Straight and retractile electric cable for in-car speakers and heaters.

SAFETY CORDS: Both straight and self-coiling, made with steel strand cable within overall jacket; cannot be cut without heavy-duty cutters.

KOILED KORDS: Extend at ratio of 5 to 1! retract to compact coil on release; adapted to either speakers or heaters for in-car use.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

THEATRECRAFT MFG. CO., 1878 E. 18th St., Cleveland, Ohio.

In-car speakers for drive-in theatres.

STANDARD: Junction box with two speakers; speaker 5¼-in all-weather unit; ship. wt. 9½ lbs.

HEATER-SPEAKER COMBINATION: Basically similar to "Standard" model, but with each speaker assembly including an electric heating unit, electrically and thermally isolated, with own louvred compartment; ship. wt. 14 lbs.

"LITTLE INFERNO" HEATER: Heater unit to be used in conjunction with standard speaker systems. Mounting bracket equipped with concealed parking light. Ship. wt. 12½ lbs.

DOMESTIC DISTRIBUTION: All theatre supply dealers, and direct.

TODD SHIPYARDS CORP., 81-16 45th Ave., Elmhurst, N. Y.

Insecticidal fog applicator.

Dry fog insecticide dissemination equipment, Series 40-E, gasoline motor-driven, self-contained for one-man operation, for insecticide effective against flies, mosquitoes, etc., without moist or discoloring residue; equipment 24x32 in., 36 in. high, adapted to jeep or trailer mounting; ship. wt. 650 lbs.

DISTRIBUTION: Direct.

WELCH EQUIPMENT, INC., 224 S. Michigan Ave., Chicago 4, Ill.

Insecticide fogging, general spraying equipment.

SUPERCLOUD MACHINE: For mounting on Willys-Overland Jeep (any model), and readily detachable; provides **aerosol fog generator** for insect control, and has attachments for various uses, as follows: **hand spray,** for direct-pressure application all liquid insecti-

cides to buildings, shrubbery, swamp areas, etc.; **6-foot boom applicator,** for direct-pressure liquid insect, fungus and weed destroyers to lawns, driveways, etc.; **6-foot road oil distributor** for oiling drives, ramps, etc.; special nozzles handle road oils to viscosity of 100, lay down oil in mist to prevent messy residue; **spray painting and tire inflation air supply,** for painting screen, buildings, etc., and for tire inflation service to patrons. Machine detachable from Jeep in 15 min. Ship. wt. 410 pounds.

BRANCH: 2875 Glendale Blvd., Los Angeles.

(ALSO SEE ADJOINING COLUMN)

DOMESTIC DISTRIBUTION: Direct; inquire also through any theatre supply dealer, Willys Overland dealers.

WHITNEY BLAKE CO., Box K, Hamden, Conn.

Underground wire for drive-in theatres.

"TELESEAL" NEOPRENE JACKETED ELECTRIC CABLE for direct trench burial to wire in-car speaker systems, and for comparable wiring, with either No. 14 wire **(Cat. No. 14-TSC-2)** or No. 12 wire **(No. 12-TSC-2).**

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Emergency Power Plants

D. W. ONAN & SONS, INC., 43 Royalston Ave., N., Minneapolis 5, Minn.

Standby electric power generating plants.

A. C. 60-CYCLE PLANTS IN FIVE CAPACITIES, gasoline engine, line transfer controls available for automatic emergency service. Models as follows:

3CK-1R, 3000w, 115v; 2-cycl. air-cooled engine; approx. 26-20 in., ht. 26 in.; domestic ship. wt. 455 lbs. **5CO-3R14,** 5000w, 115/230v; 4-cycl. water-cooled engine; 51½x22⅞ in., ht. 36 in.; dom. ship. wt. 1040 lbs. **10EL-3R,** 10,000w, 115/230v; 4-cyl. water-cooled engine; 66½x27 in., ht. 39 in.; dom. ship. wt. 1708 lbs. **15HK-3R,** 15,000w, 115/230v; 6-cyl. water-cooled engine; 82½x29 in., ht. 42 in.; dom. ship. wt. 2200 lbs. **25HN-3R,** 25,000w, 115/230v; 6-cyl. water-cooled engine; 82½x29 in., ht. 42 in.; dom. ship. wt. 2250 lbs. **35JT-3R,** 35,000w, 115/230v; 6-cycl. water-cooled engine; 88x49½ in., ht. 31 in.; dom. ship. wt. 3450 lbs. (Larger capacities to 75,000 w. available. Details on application.)

(ALSO SEE PAGE 45)

DOMESTIC DISTRIBUTION: Address sales manager, home office.

Floor Coverings

AMERICAN MAT CORP., Toledo 2, Ohio

Rubber Mats.

LINK TYPE LOBBY MATS: "Ezy-Rug" heavy-duty rubber link matting; available in black or colors.

PERFORATED TYPE: Entrance matting, perforated and corrugated; available in black or colors.

SPONGE RUBBER RUNNERS: Tile Top Sponge Rubber Runners—white marbleized, colors in green, red, black or gray, ⅜" Sponge 1/16" top material 36" wide, standard rolls approximately 25 yards.

(ALSO SEE PAGE 38)

DOMESTIC DISTRIBUTION: Direct.

BIGELOW-SANFORD CARPET CO., INC., 140 Madison Ave., New York 16, N. Y.

Theatre carpeting.

PATTERN WILTONS: "Delwood" (4-frame) and "Marshfield" (3-frame) all-wool fabrics for heavy-duty service; available in numerous stock patterns and color schemes, or available in special color combinations or patterns on order.

BROADLOOMS: Wilton and Velvet weaves in standard broadloom widths.

"CUSHIONLOK": Heavy-duty Velvet all-wool carpeting with foam rubber backing (foam rubber blown into backing to bind tufts, increase resilience, eliminate lining); available in 27-inch widths with pre-trimmed edges, pattern or solid colors.

DOMESTIC DISTRIBUTION: Through branches and authorized dealers in furnishings field; direct inquiries to home office contract dept.

EXPORT: Through home office contract dept.

GOODALL FABRICS, INC., 525 Madison Ave., New York, N. Y.

Carpeting.

"SEAMLOC" BROADLOOM: Solid-color all-wool carpeting attached by means of plastic cement to patent back, allowing formation of individual patterns in color scheme to suit; pieces are cut out (may include theatre name or emblem) and attached to backing according to pattern.

DOMESTIC DISTRIBUTION: Authorized dealers—Amer. Rug & Carpet Co., 105 Madison Ave., New York, 1347 S. Michigan Blvd., Chicago; 615 Plymouth Bldg., Minneapolis; 633 Chestnut St., Philadelphia; Santa Fe Bldg., Room 1070, Dallas; Continental Hotel, Kansas City; 759 N. Milwaukee, Milwaukee; 610 Arcade Bldg., St. Louis; American wholesalers, 5th and W. Sts., N. E. Washington; Bickford Bros. Co., 1209 Broadway, Buffalo; Crawford & Thompson, Ivey and Baker Sts., N. E. Atlanta; Edson, Moore & Co., 1702 Fort St., W. Detroit; 708 Harrison St., Flint; 335 Bond Ave., N. W. Grand Rapids; 311 Tenth St., Toledo; Elfman Carpet Co., 155 Portland St., Boston; Felix Half, 800 Penn. Ave., Pittsburgh; A. J. Wallace Mfg. Co., 77 Summer St., Boston; D. N. & E. Walter & Co., 736 Fulton St., Fresno; 508 E. Eighth St., Los Angeles; 104 S. W. Fifth Ave., Portland; 146 S. W. Temple St., Salt Lake City; 562 Mission St., San Francisco; 808 Howell, Seattle, N. 322 Division, Spokane; McGranahan Bros., 1130 16th St., Denver; Brown & Damare, Thalia at S. Jefferson Davis Parkways, New Orleans.

THOMAS L. LEEDOM CO., Bristol, Pa.

Carpeting.

WILTON WEAVES in contract grades, available in solid colors and variety of stock patterns and color schemes; also in special patterns and colors to suit interior. Grades "Latonia," "Lipton," "Laverock," "Buckingham," "Pennspoint" Looped Wilton.

BRANCHES: 295 Fifth Ave., New York; 1879 Merchandise Mart, Chicago.

REPRESENTATIVES: Berven Carpets Corp., 776 Mission St., San Francisco, and 844 S. Flower St., Los Angeles; Theo. Johnson Carpet Co., 2402 University Ave., St. Paul; Vicker-Jones Co., 2300 Griffin St. Dallas; Herman W. Seibert, 77 Summer St., Boston; Louis Hendersen, 2306 Lincoln-Liberty Bldg., Philadelphia.

C. H. MASLAND & SONS, 295 Fifth Ave., New York, N. Y.

Carpeting.

WILTON WEAVES in heavy-duty grades: "Decatur," "Tioga," "Norgate," "Scranton," "Ramsdell," "Saxony."

(ALSO SEE PAGE 3)

DOMESTIC DISTRIBUTION: National Theatre Supply branches and carpet contractors.

ALEXANDER SMITH & SONS CARPET CO., 295 Fifth Ave., New York, N. Y.

Carpeting.

VELVET WEAVES in theatre grades: "Crestwood," "Fanwood," "Tyrone"; many stock patterns and tone-on-tone designs, in variety of colors; also available in special designs for specific interiors.

(ALSO SEE PAGE 3)

DOMESTIC DISTRIBUTION: National Theatre Supply branches and carpet contractors.

[HEARING AIDS—See Projection and Sound]

Lighting

GENERAL ELECTRIC CO., Lamp Dept., Nela Park, Cleveland 12, Ohio.

Filament and fluorescent lamps; black-light sources; germicidal lamps projection lamps. (See Projection and Sound.)

GENERAL SERVICE FILAMENT LAMPS: All standard wattages up to 1,500 watts in inside frosted type; clear lamps regularly in wattages above 100 (also 10 watts). These require protection from weather; **for outdoor use, vacuum lamps** are available from 6 to 40 watts, either frosted or colored. Round and flame shapes available in outside-colored lamps, in small wattages.

LUMILINE LAMPS: Tubular filament type in clear and inside-frosted varieties, also inside-colored (straw, orange, blue, green, pink); 30 and 60 watts (17¾ inches), 40 watts (11¾ inches).

FLUORESCENT LAMPS: Phosphor-coated tubes in various diameters up to 2½ inches; lengths in inches for popular wattages—15w, 18; 20w, 24; 30w, 36; 40w, 48. New simplified line of white types. Standard cool white and standard warm white for highest efficiency; deluxe cool white and deluxe warm white for best appearance of room finishes and patrons' complexions. Colors—pink, gold, blue, green, red.

SLIMLINE LAMPS: Long fluorescent lamps in small diameter. Instant start. Same lamp can be operated at 0.120 amp., 0.200 or 0.300. Lengths and wattages: 42" (¾" dia.), 18, 25, 33 watts; 64" (¾" dia.), 27, 39, 51 watts; 72" (1" dia.) 26, 38, 51 watts; 96" (1" dia.) 34, 51, 69 watts. New line 1½" diameter, 96", 72", 48" lengths.

CIRCLINE LAMPS: Fluorescent lamps of circular shape; diameters, 12 inches; white.

PROJECTOR LAMPS: (PAR38) Filament type with built-in reflector, hermetically sealed for outdoor as well as indoor use; available for spot and flood applications; 150 watts; base for regular sockets. New 200-watt PAR46 narrow beam spot.

REFLECTOR LAMPS: Filament type with built-in reflector fabricated for indoor use; a spot and a flood variety; 75, 150 and 300 watts, base for regular sockets. New 300-watt spot and flood. Heat resistant glass bulb, mogul screw base.

BLACK LIGHT SOURCES: Filament ultraviolet (Purple X) lamps, 250 watts, bulb dark glass to filter out visible light (relatively low output), for intermittent burning; **fluorescent** tubular ultraviolet lamps Type "Black Light" in regular fluorescent lamp sizes and wattages, **mercury** ultraviolet lamps **(Type H),** used with filter for visible light. Popular sizes: 100 watt EH4 (flood) and CH4 (spot) sealed beam type, and 250 watt AH5.

GERMICIDAL LAMPS: Ultraviolet tubular lamps for placement in air ducts, and for room installation in special fixtures.

DISTRIBUTION: Lamps most used by theatres stocked by many theatre supply dealers; others by electrical supply dealers; orders through either for lamps not in stock.

INCREASE DRIVE-IN PROFIT
SUPERCLOUD insect control and maintenance machine controls all insects and does your maintenance with but ONE unit.
● aersol fog generator for all insect controls
● hand spray attachment for direct application of insecticides to fences, walls and buildings
● 6' boom road oil applicator for ramps and driveways
● 6' boom weed control applicator for lawns
● air supply for spray painting and tire inflation
ALL this in ONE machine that mounts on any JEEP.
Welch Equipment
Incorporated
224 SOUTH MICHIGAN AVENUE · CHICAGO 4, ILLINOIS

KLIEGL BROS., 321 W. 50th St., New York 19, N. Y.

Stage, interior, architectural, display, spots and floods, lighting control equipment.

STAGE: Footlights, borderlights, floor and wall pockets, light strips, floods, etc., furnished to specifications, with all accessories. Spotlights both filament lamp and carbon arc in variety of capacities and types, for stage location, balcony mounting, or projection room installation.

DOWNLIGHTS: Fixed and adjustable beam types; pin-hole spot units. Also flush Fresnel-lens fixtures, circular and square.

DISPLAY: Projector type poster lamps with objective lens and adjustable framing shutters; floodlights and spot lamps, with or without color gelatine attachment.

DIRECTIONAL SIGNS: Flush and surface exit fixtures in a variety of sizes, rectangular and triangular; suspension model with edge-lighted lettering; also globe and outlet box type exit signs.

(ALSO SEE BELOW)

DISTRIBUTION: Through electrical contractors, and direct.

SUPERIOR ELECTRIC CO., Bristol, Conn.

Dimmers, voltage regulators.

"POWERSTAT" AUTOTRANSFORMER DIMMERS: Non-interlocking in either manually-operated or motor-driven models, for 120-volt lines, single circuits of 1000, 2000, 5000, 10,000, 15,000, 20,000, 30,000 watts; two and three circuits of 2000 and 500 watts; four, five or six circuits of 5000 watts; speeds blackout to brilliancy 45, 19 or 14 seconds all models, also 6 seconds in most; max. ship. wt. 620 lbs. (1-circ. 30,000w). **Interlocking Switchboard Models**, 120v, single units to total installation wattage specifications (watts per circuit 2000 or 5000); also in factory-framed assemblies (single- or double-bank) with or without shafting, gearing drum and handle, etc., as desired.

"PACKAGED POWERSTAT" DIMMERS: Encased type rated up to 6000w total output (240/120v input) **Model DBP3**—2000 3 circuits 2000w per circuit 15⅛x36⅛x13 in.; **Model DBT3**—2000 same but with twistlock instead of pin receptacles **Model DBR**—1000, 6 circuits. 1000w per circuit, 14½x19x9¼ in.

VOLTAGE REGULATORS: "Stabiline" line in both **instantaneous electronic** and **electromechanical** models, with input voltage range 95-135 for 110-120v lines, 195-255 for 220-240v lines, single- or 3-phase (electro-mechanical; this type also available input voltages range of 380-500 for 420-460v lines. Instantaneous-electronic models available in capacities of ¼ to 5 KVA, Electro-mechanical available in capacities from one to 100 KVA.

DOMESTIC REPRESENTATIVES (exclusive): H. S. Gregory, 227 N. Peters St., New Orleans; T. M. Salisbury, Box 1085, Jackson, Miss; L. C. Hardie, Box 1491, Des Moines, Ia.; Buryl R. Hill Co., 1941 James Couzens Highway, Detroit; L. R. Ward Co., 2711 Commerce St., Dallas; J. F. Gaumer, M & M Bldg., Houston; F. W. Carlson, 307 Wall St., Seattle; J. E. Edstrom, 519 N. W. Park Ave., Portland, Ore.; J. C. Van Groos, 1436 N. Serrano Ave. Hollywood; R. J. Caccavelli, The Superior Electric Co., P. O. Box 48, Oak Park, Ill.; Joseph N. Crevasse, 227 W. Forsyth St., Chamber of Commerce Bldg., Jacksonville; H. C. King, 1717 Second Rd., Cincinnati; Paul Williams 341 Hazelwood. San Francisco.

Cable Address: SECO SEER. **EXPORT AGENT:** Paul Williams, 341 Hazelwood, San Francisco 12.

WARD LEONARD ELECTRIC CO., Mount Vernon, N. Y.

Dimmer systems.

RESISTANCE TYPE: "Vitrohm" line of vitreous enamel, pressed steel type; interlocking or non-interlocking; for manual or motor operation; standard sizes to 6,000 watts max.; single or dual rating plates; all forms of master control (subject of Bulletin 71, 72).

AUTOTRANSFORMER TYPE: "Autrastat" radial type, interlocking or non-interlocking, manual or motor; lamp voltage independent of load; standard sizes—4,000 watts, dia. 13 in.; 8,000 watts, dia. 15¼ in. rectangular type, 4,000 watts (Bulletin 76).

REACTANCE TYPE: With Hysterset control, maximum operating flexibility; standard sizes 1 to 14 kw. (Bulletin 74).

CYCLE DIMMERS: Mobile automatic control of above types available in non-adjustable, adjustable cam, adjustable flasher cam operated pilot models (Bulletin 78).

DOMESTIC DISTRIBUTION: All supply dealers.

WESTINGHOUSE ELECTRIC CORP., Lamp Division, Bloomfield, N. J.

Filament and fluorescent lamps, neon indicators, gemicidal and black-light lamps; mazda projection lamps (see Projection and Sound).

FILAMENT—GENERAL SERVICE, SIGN AND DECORATIVE: Regularly available inside-frosted 10-1000 watts; clear bulbs 6- 10-w, and wattages above 100; coated colored 10-40 watts; also 15w, 25w. 40w round and 15w and 25w flame shape. Vacuum lamps for outside exposed use, 6w to 40w.

FLUORESCENT (F-Lamps): White, Daylight, Standard Cool White in 6, 8, 13, 14, 15, 20, 25, 30, 40, 85, watts in lengths 9-60 inches, diameters ⅝ to 2⅛ inches; Soft White and Warm White (light quality similar to filament lamps) in 15, 20, 25, 30, 40, 85 watts; colors (blue, green, pink, gold, red) in 15, 20, 30, 40 watts. "Nite-Lite" 1 watt Fluorescent—watt. Also semi-circular **"Circlarc"** 18 watts; full-circle **"Circline"** 32 watts.

SLIMLINE FLOURESCENT: T-6 type, 42- and 64-inch; T-8 type, 72- and 96-inch; both in all standard whites. T-12 type, 48-, 72- and 96-inch

PROJECTORS AND REFLECTORS: Self-contained with sealed-in reflector for either spot- or floodlight. **Projector** type for both outdoor and indoor use, 75w, 150w. **Reflector** type for indoor use, 75w, 150w, 300w.

LUMILINE: Tubular filament, inside-frosted, straw, orange, blue, emerald, pink, white in 30w and 60w (17¾ in. long), and 40w (11¾ in.).

BLACK-LIGHT SOURCES: Fluorescent tubes (Type 360BL) in 6, 15, 30, 40 watts; mercury vapor bulbs (particularly C-H4 spotlight, E-H4 floodlight); 250-watt filament, purple X filament, ultraviolet with visible light filter.

GERMICIDAL STERILAMPS: Tubular ultraviolet for air disinfection installation in air ducts, or in special room fixtures.

NEON INDICATORS: Indicator lights in variety of sizes from 1/25 to 1 watt.

DISTRIBUTION: Stocked by theatre supply and electrical supply dealers, otherwise consult nearest Westinghouse Lamp Division office.

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Footlights
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321 WEST 50th STREET

NEW YORK 19, N.Y.

Maintenance and Wash Room Equipment

BREUER ELECTRIC MFG. CO., 5100 Ravenswood Ave., Chicago 40, Ill.
Maintenance equipment.
"TORNADO" NO. 48T: Portable electric air sweeper, 3/5 h.p.; universal air-cooled motor.
"TORNADO" NO. 92: Commercial wet and dry pickup vacuum cleaner; 1⅓ h.p.; universal air-cooled motor; demountable motor unit conversion feature.
"TORNADO" NO. 1400: All-purpose floor machine; ½ or ¾ h.p. capacitor start motor.
DOMESTIC DISTRIBUTION: Authorized dealers (name for specific territory available from company on request).
(ALSO SEE PAGE 41)

CHICAGO HARDWARE FOUNDRY COMPANY, North Chicago, Ill.
Electric hand driers.
PEDESTAL MODEL NO. 5—SF; Drier equipment mounted on pedestal with foot pedal switch, drier housing and pedestal finished in porcelain enamel in white, with black, brown, gray or ivory optional; standard 115 volts; 13.5 amps. rated capacity, 17-5 amps. available.
WALL MODEL NO. 7 SR-W; Semi-recessed type adapted to wall 4 inches or more thick; recessed foot pedal; porcelain enamel drier housing.
WALL MODEL NO. 6 SF-W: For mounting on shelf; hand switch (with timer for automatic turn-off); porcelain enamel, white with black, brown, gray or ivory optional.
(ALSO SEE PAGE 15)
DOMESTIC DISTRIBUTION: Direct and all theatre supply dealers.

GENERAL ELECTRIC CO., Vacuum Cleaner Div., Bridgeport 2, Conn.
Heavy-duty vacuum and blower equipment.
TANK TYPES of various capacities, dimensions and weights, each designed for both wet and dry pickup, and for blowing debris to points of collection, boiler cleaning, etc.; motors air-cooled, a.c./d.c.; cords with all-rubber jackets; ball bearings packed in grease; bumper soft rubber. Models as follows:
MODEL 203: 3/5 h.p.; vacuum 45 inches; ht. 25¾ in., width 17 in., wt. 40 lbs.; container cap. ½ bu.
MODEL 169A: 1 h.p.; vac. 45 in.; container cap. 1.08 bu.; ht. 30 in., diam. 19 in., wt. 51 lbs.
MODEL 175: 1 h.p., vac. 43 in.; container cap. 1¼ bu.; ht. 32 in., diam. 35 in., wt. 51 lbs.
MODEL 184A: 1 h.p., vac. 60 in.; container cap. 1¼ bu.; ht. 34½ in., diam. 22 in., wt. 68 lbs.
MODEL 184 AWP: Same as Model 184 A, with protector fuse to prevent liquids from overflowing container.
MODEL 175A: Same as Model 175, except diam. 21 in., wt. 49 lbs.
MODEL AV1-189WP: ½ h.p., vacuum 40 inches, ht. 15½ in., diameter 13¾ in., wt. 23½ lbs., cap. 1½ gals.
(SEE ADJOINING COLUMNS)
DOMESTIC DISTRIBUTION: National Theatre Supply, 92 Gold St., New York 7, N. Y., and direct.

NATIONAL SUPER SERVICE CO., INC., 1941 N. 13th St., Toledo 2, Ohio.
Vacuum cleaners.
THEATRE CLEANER: Heavy-duty equipment on two rear wheels and two front casters, for dry or wet pickup, and with blower elbow; attachments include floor tool with 3½-in. clearance, screen brush, tube for high wall cleaning; spotlight available for attachment to handle.
(SEE ALSO PAGE 42)
DOMESTIC DISTRIBUTION: All theatre supply dealers.

SPENCER TURBINE CO., Hartford 6, Conn.
Vacuum cleaning equipment.
COMMERICAL MODEL: Mounted on 10-in. rubber-tired rear wheels and single front caster; 1 h.p. universal motor operable on a. c. or d. c.; 50-in. water lift at end of 25-ft. hose of 5/16-in. orifice; wt. 188 lbs. net; attachments include wet separator for wet pickup, dry mop cleaner; dirt pan cap. 6 gal.
MULTI-VAC SENIOR: Motor ¾ h.p.; wt. 58 lbs.; dirt can cap. 4 gal.; 47-in. water lift at 25 ft. 5/16-in. orifice. **Multi-Vac Junior,** ½ h.p., dirt cap. 1.6 gal.
STATIONARY SYSTEMS: Central vacuum cleaning plants in capacities to requirements of theatre.
(SEE ALSO PAGE 39)
DOMESTIC DISTRIBUTION: Authorized dealers, and direct.

Projection and Sound

C. S. ASHCRAFT MFG. CO., 36-32 38th St., Long Island City, N. Y.
Projection arc lamps, rectifiers for d. c. projection arc supply.
75-115 AMPERE REFLECTOR LAMP: "Super-High" using 9 m/m x 20 in. or 10 m/m by 20 in. rotating positive (water cooled)—5/16 x 9 and 11/32 x 9 in. negative—16 in. F1.9 reflector.
60-85 AMPERE REFLECTOR LAMP: "Hydro-Arc" using 9 m/m x 20 in. or 8 m/m x 14 in. positive (water cooled) 7 m/m x 9 in. neg. 15 in. reflector.
40-65 AMPERE REFLECTOR LAMP: "Suprex C70" using 7 or 8 m/m x 14 in. positive, 6 or 7 m/m x 9 in. negative, 14 in. reflector.
RECTIFIERS: Selenium 60-90 amperes and 60-100 ampere. 3 phase.
WATER CIRCULATORS for water cooling positive carbons. (ALSO SEE THIRD COVER)
DOMESTIC DISTRIBUTION: Authorized theatre supply dealers (name for specific territory on request from manufacturer).
EXPORT: Westrex Corp., 111 Eighth Ave., New York 11; except in Canada: Dominion Sound, 114 Bond St., Toronto.

AUTOMATIC DEVICES CO., 116 N. 8th St., Allentown, Pa.
Motor-generator sets for d.c. supply from a.c. lines.
BUILT-UP UNIT TYPE ("Stabilarc" No. 195): Available in output ranges from 20-40 amperes to 1000-1500 amperes. Generator, rheostats and starter separate units. Regularly available in 42, 60 or 80

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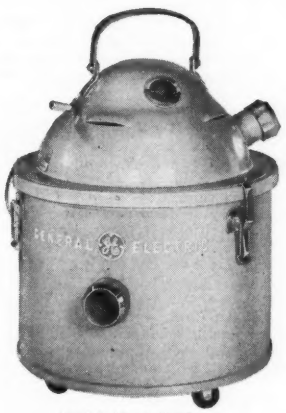
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volts for 60-cycle lines; **sizes** 20-40, 30-60 and 40-80 amperes mounted on sub-base.

STANDARD MODEL ("Stabilarc" No. 1373): A complete unit with generator, ballast resistors, across-the line starter and control panel; available in Model 195 output ranges and regular voltages, 60 cycles (other line conditions accommodated on special order).

DISTRIBUTION: All theatre supply dealers.

BALDOR ELECTRIC CO., 4351 Duncan Ave., St. Louis 10, Mo.

Tube rectifiers for projection arc supply.

MODEL 30A: For low-intensity arcs; 15-30 amps., at 50-55 d.c. volts.

MODEL 45: 1 kw. (40 amps., 27-28 volts); single-phase designed to deliver up to 45 amps., 3-phase to 50 amps.; both with voltage taps up to 32 d. c. arc volts.

MODEL 60: Suprex carbon arc supply to 60 amps.; output voltage tap 50-55 d. c. volts for application also to low-intensity motion picture arc or spotlight.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

THE BALLANTYNE CO., 1707 Davenport St., Omaha, Neb.

Projectors, Arc Lamps, Rectifiers, Pedestals, Magazines, Soundheads, Amplifiers, Horn Systems, Drive-In Speakers.

COMPLETE SOUND SYSTEMS: Arranged in five capacity groups—to **1250** seats (with No. 39) horn system), Models 530, 630, 730; **up to 900 seats** (with No. 20 horn system) Models 520, 620, 720; **Up to 600 seats** (with No. 14 horn system), Models 514, 614, 714; **up to 350 seats** (with No. 11 co-axial two-way speaker), Models 511, 611, 711; **up-to- 350 seats** (with HF-7 "Silver Spiral" speaker). Models 507, 607, 707. Sound systems also available with **Western Electric** or **Altec-Lansing horn systems.**

SOUNDHEADS: Designed for use with all standard makes of projectors, and adaptable to Power's. **Model 6** has directly connected all-gear flexible soundhead-projector motor drive, vibration-filtering exciter lamp mounting, isolated sound feed sprockets, gyroscopically controlled rotary scanning drum, constant axis optical system carriage, prefocused exciter lamp. Gear boxes for 25-, 50- or 60-cycle current; boxes interchangeable. **Model 8** same basic features as Model 6 and additionally a steel gyro-filter to assure constantly smooth travel of film over scanning drum, drive guard with provision for oiling without removal, handwheel for threading.

HORNS AND SPEAKERS: Three two-way systems with cellular high-frequency horn (Alnico 5 PM driver), 15-inch **PM** low-frequency speaker unit mounted in acoustically reinforced horn baffle; and two small theatre models (HF-7-SS and No. 11). **Model 30** has two low-frequency units; dividing network crossover at 500 cycles; five-step high-frequency attenuation for acoustical adaptation to auditorium. **Model** 20 similar to No. 30, but with single low-frequency unit. **Model 14** has smaller low-frequency baffle with simpler high-frequency cellular horn mounted on top for adaptation of units to smaller theatres. **Model HF-7-SS, for auditoriums up to 350 seats, has a "Silver Spiral" speaker mounted in horn** baffle for full frequency output. **Model 11 has two-way speaker unit, combining cellular high-frequency horn by means of an acoustical coupler, with dividing net**work and horn baffle mounting. Also can supply **Western Electric** and **Altec-Lansing horn systems.**

HIGH-INTENSITY ARC LAMPS: Three reflector types—**Hydro-Arc,** for large theatres and for drive-ins; Model 4570 "Lightmaster" for theatres and drive-ins; and "Arcmaster" 1-kw lamp. **"Hydro-Arc 8,"** 7x8mm trim, 74 amps., water cooling. **"Hydro-Arc 9,"** 5/16" 9mm horizontal trim, 85 amps., water cooling (mfg. for Ballantyne exclusively by C. S. Ashcraft Mfg. Co.).

Model 4570, 45-70 amps., arc magnetization by steel loop energized only when arc is burning; 14-in. reflector at 32-in. working distance for optical efficiency with f/2.0 lens; each carbon fed by independent screws with 10-in. travel on positive; mirror flame shield and dowser operated by handles on both sides; finished in grey wrinkle with anodized aluminum trim. **"Arc-master,"** 45-50 amps., magnet arc stabilization, manual carbon positioning, double cone drive for positive feed, mirror guard operated by dowser lever.

RECTIFIERS: Six tungar tube types—SP40, 4 tubes, 40 amperes, single-phase; SP60, 4 tubes, 60 amperes, single-phase; 3P60, 4 tubes, 60 amperes, three-phase; SP80, 6 tubes, 80 amperes, single-phase; 3P80, 6 tubes, 80 amperes, three-phase. Also **90-amp. model,** single or three-phase for "Hydro-Arc 9" supply.
ish in gray baked-on wrinkle paint.

PEDESTALS: Two regular theatre models, either available with upward-tilt equipment carriage for drive-in theatres. **Model 1500** is straight-column type; **Model 1800** has forward slant (streamline effect). Lamp and motor switches available for mounting on either.

EXCITER LAMP SUPPLY: Three types—Model BX, a dry disc unit for installation in No. 1500 pedestal. Model BXK, two dry disc units in one wall cabinet; Model N50-D, tube type for two 10v, 5 amp. lamps.

AMPLIFIERS: Complete series of amplification units for regular theatres, in dual or single channel cabinet; and the MX Series for drive-in theatres. **Dual channel** system (PD-56) has two amplifiers with switch changeover, monitor and its amplifier built in. PD-55 provides **single channel** in dual cabinet for adding standby. All volume controls of step type with silver contacts. Also available are **speaker-amplifier equipment for cry-rooms,** etc. (PD-52); **hearing aid amplifier** (PD-53); **monitor cabinet** (PD-54). The **MX Series** for drive-ins provides systems for from 200 to over 1,000 cars. **MX-1** single-channel 200w; **MX-2** dual-channel 200/400w; both systems include **MX-28A ramp control panel** to monitor or cut out any speaker section; room panel accommodates cabinet for non-sync, radio, etc.

PROJECTORS: Two models—**Model R,** rear shutter of direct-drive double-dissolving barrel type, gears alternately steel and fibre, gate removable as unit, framing knob both sides, cast-iron main frame, aluminum doors and housing, 18-inch magazines; **Model BW** (mfd. by Wenzel Projector Co.), oilite bearings, drive a stationary stud turned by main drive gear, lens mount with adjustments front of case, framing light and full-size door on operating side, rear shutter, provisions for 4-inch lens mount.

DRIVE-IN SPEAKER: Two series — **MX-30,** PM speaker in cast-aluminum housing with baked bronze hammerloid finish, junction box of same housing designed for standard post without adapters, can be equipped with parking light; **MX-40** same except steel case. **Post Model** available in standard and deluxe style, similar to in-car types.

(SEE ALSO PAGE 33)

DOMESTIC DISTRIBUTION: Authorized theatre supply dealers (name for specific territory available from manufacturer). **Cable Address:** BALCO. **Export Agent:** K. Streuber & La Chicotte, 1819 Broadway, New York 23 (cable KASTREUBER).

BAUSCH & LOMB OPTICAL CO., 635 St. Paul St., Rochester, N. Y.

Projection lenses.

SUPER CINEPHOR: Coated lenses working at an aperture of f/2.0, available in focal lengths from 2 to 5 inches in ¼-inch steps. In permanently sealed mounts to prevent internal dust, dirt or oil vapor. Focal lengths 2, 2¼, 2½ and 2¾ mounted in No. 1 barrel, others in series in No. 2 barrel.

LONG FOCUS SUPER CINEPHOR: Coated lenses, f/2.0, focal length 5¼ in. to 7 in. in ¼" steps. 4" diameter one piece barrel, increased illumination, heat resistant cement, regular production for prompt delivery.

CINEPHOR SERIES II: Coated lenses available in the longer focal lengths, from 5¼ to 9 inches; hence, maximum speed f/2.4 (down to f/3.7, depending on focal length). Permanently sealed.

POPULAR-PRICED CINEPHOR: These are f/2.0 lenses formerly uncoated, but now coated without increase in price. Available in focal lengths 3½ to 5 inches. Mounted in No. 2 barrel.

CINEPHOR SERIES I: Adapted to small operations and portable equipment. Available uncoated or coated in focal lengths from 3 to 6 inches. Speed (depending on focal length) from f/2.5 to f/3.4.

BRANCHES: 1324 Eye St., N. W., Washington 5, D. C.; 16849 Grand River, Detroit 26; 30 Rockefeller Plaza, New York 20; 5 N. Wabash Ave., Chicago 2; Box 2142, 1814 Chestnut St., Philadelphia 3; 131 Clarendon St., Boston 31; Flood Bldg., San Francisco; 314 W. Sixth St., Los Angeles 14; 388 Yonge St., Toronto, Ont., Canada.

DOMESTIC DISTRIBUTION: NTS branches: RCA dealers (asterisk); and 1, 3, 4, 5, 7, 10, 11, 12, 16, 17, 23, 24, 25, 32, 34, 38, 41, 42, 43, 49, 55, 57, 58, 59, 61, 65, 70, 75, 81, 82, 84, 85, 93, 103, 104, 105, 107, 109, 111, 120, 121, 122, 123, 128, 131.

EXPORT AGENTS: National Theatre Supply, Export Dept., 92 Gold St., New York 7; RCA International Division, 745 Fifth Ave., New York 22; K. Streuber & La Chicotte, 1819 Broadway, New York 23; Westrex Corp., 111 Eighth Ave., New York 11.

BEST DEVICES, INC., 10516 Western Ave., Cleveland, Ohio.

Spotlights, color wheels, slide projectors, projection room fire shutters.

SPOTLIGHTS AND COLOR WHEELS: Spotlights of 100w, 400w, 1000w. Two models automatic **color wheels, Model 155** five changes per minute, plastic wheel synchronous motor; other 400w, six changes per minute, either plastic or gelatine colors.

SLIDE PROJECTORS: Automatic model in 500w for 10 slides, 1000w for 12 slides, 1500w for 15 slides; also 500w, 1000w, 1500w non-automatic for either 3¼x4 or 2x2 slides.

FIRE SHUTTERS: Sized to projection room specifications and fabricated of 10-gauge and ¼-in. steel, welded construction.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

CALI PRODUCTS CO., 3721 Marjorie Way, Sacramento 17, Calif.

Carbon savers.

CARBON COUPLERS for all suprex carbon trims.

(SEE ALSO PAGE 68)

DISTRIBUTION: All theatre supply dealers, and direct.

CARBONS, INC., 400 Myrtle Ave., Boonton, N. J.

Carbons for projection arc lamps.

"LORRAINE" Carbons (manufactured by **Le Carbone-Lorraine,** France), comprising a complete line of types and sizes for high-intensity arc lamps for 35mm motion picture and comparable light projection.

(SEE ALSO PAGE 51)

DOMESTIC DISTRIBUTION: By authorized dealers in certain territories (names and addresses on request of Carbons, Inc.) and elsewhere direct.

SAVE MORE ON CARBONS

Full Refund If not 100% Satisfied

Patents Pending

CALI CARBON COUPLERS Let You Burn All the Carbon

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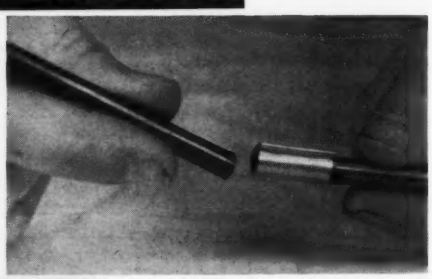
So inexpensive you can run them right through the arc and burn them up with the carbon. Order Now! Mention size: 6, 7 or 8MM. At your Independent supply house or send $2 for a year's supply of 100 couplers of any one size (add sales tax for your state)



Most economical carbon saver you ever used!

CALI Products Company

3721 Marjorie Way Sacramento 17, Calif.

They're Expendible
No worrying about injury to high priced carbon savers.
Burn 'em up, you still profit.

UMI

CENTURY PROJECTOR CORP., 729 Seventh Ave., New York 19, N. Y.

Projectors, pedestals, magazines, soundheads, amplifiers, rewinders.

PROJECTOR MECHANISMS: Single rear shutter (Model C) and double shutter (Model CC) with two rear shutters operating in one casing. Mechanisms also supplied with water cooled apertures. Special lens mounts for 4" diameter lenses also available. **Magazines,** 3,000-foot for standard and for drive-in theatres. An **air deflector (CI-T-100)** is available for mounting on any mechanism of rear shutter type where lamp shows sensitivity to air disturbance.

PEDESTALS: Two types, Model C and Five-Point "L" Type, each available for regular theatres and for drive-in theatre upward tilt.

SOUNDHEADS: Two series, each with "Hydro Flutter Suppressor," rated to reduce film-flutter to .08% or less. The "Master" (Model R2) is further equipped with an "electric-tension governor" for flutter elimination, and vertical drive motor with flexible coupling. The "Standard" (Model R3) is of simplified design, with sound sprocket replaced by drum device.

AMPLIFIERS: Main amplifier, W3-11, 15 watts, with low-capacity cable connector to photocells; main amplifier, W5-17, 18 watts, used with pre-amplifiers; 200 watts (W5-19) power amplifiers of 40 watts (43-40), 75 watts (287-F75), 250 watts (287-W250).

SOUND SYSTEMS: No. 5, 18 watts, consisting in R5 soundheads and W5-17 main amplifier; No. 6, 18 watts, R6 soundhead and W5-17 main amplifier; No. 7, 15 watts, R3 soundhead and W3-11 main amplifier; No. 8, 15 watts, R2 soundhead and W3-11 main amplifier. Systems with cabinet or rack mounting of amplifiers for dual channel operation, for two or three projectors, with a. c. or d. c. exciter lamp power supply; and can be built up to 1,000 watts in power.

REWINDERS: Two heavy-duty models—M & P clamp type, and MM & PP bench type.

ACCESSORIES AND PARTS: Replacement parts for Century Model K and Kaplan projectors; rear shutter attachment (No. D-90) for converting front shutter mechanisms; double bearing (No. BB) and supermovements (No. BBB) for Kaplan mechanisms; tools for repairing projector mechanisms, and "Century Certified" projector oil available in 1 gal. tins.

DOMESTIC DISTRIBUTION: Dealers 1, 3, 6, 10, 19, 22, 23, 29, 34, 40, 41, 45, 53, 58, 60, 64, 69, 72, 78, 82, 83, 87, 88, 96, 100, 105, 111, 113, 116, 117, 124, 129, 130.

EXPORT: Westrex Corp., 111 Eighth Ave., New York 11.

CONTINENTAL ELECTRIC CO., Geneva, Ill.

Electronic tubes for sound systems and current rectification.

"CETRON" LINE of photocells for motion picture soundheads; tungar tubes for projection a. c. power line rectifiers (also Thyratron tubes for lighting control consoles and comparable current control).

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Cable Address: CONTINENTAL. **EXPORT:** E. D. Magnus & Associates, 188 W. Randolph St., Chicago 1.

DA-LITE SCREEN CO., 2723 N. Crawford Ave., Chicago, Ill.

Motion picture screens.

V-1, matte-white folding screen, flame-proof, mildew resistant.
V-1 and **V-2** matte-white folding screens, flame-proof, mildew resistant.
V-4 glass-beaded type.

(ALSO SEE PAGE 57)

DISTRIBUTION: All theatre supply dealers.

DeVRY CORP., 1111 Armitage Ave., Chicago, Ill.

Sound projectors, amplifications systems, in-car speakers, 16mm sound-projection equipment.

THEATRE PROJECTION-SOUND SYSTEM ("12,000 Series"): Unified projector-soundhead with or without the complete amplification system built up according to capacity of theatre from amplifier units noted below, and available with Altec-Lansing two-way horn system. Pedestal designed for downward or upward tilt, with built-in rectifier for exciter supply. Heads designed for removal by units for servicing, including sprocket assembly. Shutter rear barrel double-action type. Chain drive.

AMPLIFIERS: Six systems, two not requiring pre-amplifiers—20-30 watts single channel **(No. 28-20)** and dual channel **(No. 28-23)** with built-in monitor. With pre-amplifiers—**No. 12,020,** 20-30 watts single; **No. 12,016,** 40-60 watts dual; **No. 12,030,** 80-120 watts dual; **No. 12,822** 250 watts single, specified for drive-in theatres.

IN-CAR SPEAKERS: Drive-in units designed for standard pipe mounting; speakers Alnico-v PM, 5-inch; spring-coiled cable; housing aluminum alloy, gray hammerloid finish.

TRANSPORTABLE 35mm SOUND PROJECTOR (Model 2810): Mazda illumination to 1,000 watts; carried in all-metal case, except for amplification and speaker; with portable amplifier and 12-inch heavy-duty PM speaker, or adapted to permanent sound system.

PORTABLE 35mm SOUND PROJECTOR ("Suitcase" Model No. 1): Mazda illumination to 1,000 watts; wt. approx. 60 lbs.; with portable amplification and speaker as above, or adapted to permanent sound system.

PORTABLE 16mm SOUND PROJECTOR ("Super 16"): Complete projection and sound equipment in two matched duraluminum cases; mazda illumination to 1,000 watts with special condensing system and projection lens f/1.6 in all focal lengths including 4 inches. Sound output rated to approx. 800 persons, more with booster amplifier. Automatic loop setting device. Pre-amplifier stage independent of main amplifier, built into soundhead.

PORTABLE 16mm SOUND PROJECTOR ("Theatre-in-Suitcase" model): Single case equipment, wt. approx. 31 lbs.; mazda illumination to 1,000 watts; projection lens, standard f/1.6-1 2 inches; sound output rated to 500 persons, more with booster.

(ALSO SEE PAGE 28)

DOMESTIC DISTRIBUTION: Dealers 6, 21, 22, 31, 37, 59, 64, 83.

Cable Address: HERMDEVRY.

DROLL THEATRE SUPPLY CO., 925 W. Jackson Blvd., Chicago 7, Ill.

Carbon-saver processed carbons.

Available for high-intensity trims: negatives 6mmx9", 7mmx9", 13.6mmx22"; positives 7mm and 8mm, by 12" and 14".

(ALSO SEE PAGE 56)

DISTRIBUTION: Direct.

FOREST-HARRISON, INC., 207 Railroad Ave., Harrison, N. J.

Rectifiers for d. c. projection arcs.

No. LD-30: 110/120v, single-phase, 50/60 cycle; net wt. 87 lbs., ship. wt. 110 lbs; 22x12x12 ins.
No. LD-60: 210/240v, single phase, 50/60 cycles; net wt. 170 lbs., ship. wt. 200 lbs.; 13½x19x25 ins.
No. LD-75 THREE PHASE: 210/360 and 360/390 volts, 50/60 cycle; net wt. 185 lbs., ship. wt. 214 lbs.; 12½x20½x37 ins.
No. LD-50: 210/240v, 3-phase, 50/60 cycles.
No. LD-90: 220/240 and other voltages, single- and 3-phase, 50/60 cycles.

SELENIUM OR MAGNESIUM COPPER SULPHIDE TYPES: 210/240v, 3-phase, 50/60 cycles—Single 50, Single 70, Twin 50, Twin 70.

DOMESTIC DISTRIBUTION: Authorized theatre supply dealers (name for specific territory from company on request).
Cable Address: FOREST. NEWARK (Bentley's Code).

EXPORT AGENT: James L. McFadden, 22 Lawrence St., Newark.

GARVER ELECTRIC CO., 327 Carter St., Union City, Ind.

Bulb type projection arc current rectifiers.

TWO-TUBE: 30 amps. (low-intensity).

FOUR-TUBE: Two caps., single and 3-phase—40 or 60 amps.

SIX-TUBE: 80 amps., single and 3-phase.

(ALSO SEE PAGE 70)

DOMESTIC DISTRIBUTION: All theatre supply dealers.

GENERAL ELECTRIC CO., Lamp Dept., Nela Park, Cleveland 12, Ohio.

Filament projection lamps (mazda), exciter lamps.

PROJECTION LAMPS: Tungsten filament lamps in all types and sizes for motion picture and other light projection

EXCITER LAMPS: All types and sizes for motion picture sound reproduction.

DISTRIBUTION: Theatre supply dealers and electrical distributors.

GOLDBERG BROTHERS, P. O. Box 448, Denver 1, Colo.

Rewinders, reels.

REWINDER: Fully enclosed type, motor-driven, for diameters to 15 inches; equipped with automatic stop.

REELS: Fabricated of aluminum in two sizes—diameter 15 inches, hub 5 inches (2,000 feet); diameter 14 inches, hub 4 inches. Double-slot threading. Approx. wt. 2½ lbs.

BOOTH TABLES: Constructed of heavy angle iron, with steel top reinforced. Made in 2 sizes, 45 in. and 60 in. long. Cabinets: Fabricated of zinc-bond steel, with inner reinforcements between the one inch hollow wall that separates each section. Made from 2 to 12 section units.

(ALSO SEE PAGE 58)

DOMESTIC DISTRIBUTION: All theatre supply dealers.

GORDOS CORP., 86 Shipman St., Newark 2, N. J.

Rectifier tubes.

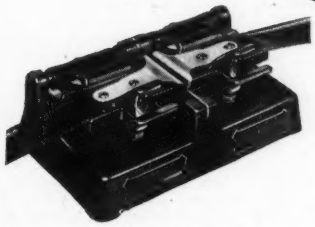
G-83, 15-amp.; **G-48,** 6-amp.; **G-65,** 2-amp.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

EXPORT AGENT: Bizzelle Cinema Supply Corp., 420 W. 45th St., New York.

KNOWN AROUND THE WORLD AS "THE FINEST MADE"

GRISWOLD SPLICERS



GRISWOLD MODEL R-2 SPLICER
for all 35mm films

FAVORITE OF PROJECTIONISTS FOR OVER 35 YEARS . . .

because of its sturdy all-metal, high-precision construction and exclusive features that assure a clean, square splice on a frame line every time with film in perfect alignment and perforations accurately spaced. If your dealer can't supply you, order from our National Distributor—

NEUMADE PRODUCTS
330 W. 42nd St., New York 18, N. Y.

★ GRISWOLD MACHINE WORKS
DEPT. B, 410 MAIN ST., PORT JEFFERSON, NEW YORK
Patentee, original and sole manufacturer of genuine GRISWOLD Splicers

UMI

GRISWOLD MACHINE WORKS, Port Jefferson, N. Y.

Film splicers.

MODEL R-2, 35mm: For 1/16- or 1/10- or 5/32-inch splice; also non-perforated type for 1/16- or 1/10- or 5/32 inch splice; also single perforated type for 1/16- for 1/10- or 5/32-inch splice.

MODEL T, 35mm: For 1/16- or 1/10- or 5/32-inch splice.

DUPLEX MODEL R-2, 35mm and 16mm: For 1/16 and 1/10-inch splice.

SUBSTANDARD NON-PERFORATED MODELS: R-3 non-perforated for 16 mm, 1/16- or 1/10-inch splice; Models T, R-3, Junior for 16mm and 8 mm, 1/16- or 1/10-inch splice.

(ALSO SEE PAGE 69)

DOMESTIC DISTRIBUTION: Neumade Products Corp.

HELIOS CARBONS, INC., 9 W. Park St., Newark, N. J.

Projection arc carbons.

HELIOS "BIO" carbons manufactured in Germany; types and sizes for all projection arc lamp trims.

(SEE ALSO PAGE 17)

DISTRIBUTION: All unaffiliated theatre supply dealers, and direct.

HERTNER ELECTRIC CO., 12690 Elmwood Ave., Cleveland 11, Ohio.

Motor-generators for projection arc supply.

33-VOLT ("Transverter" LV-40/80): For 1kw high-intensity arcs; 40 amp. continuous, 80 amp. changeover.

48 VOLT ("Transverter" HI): Two sizes for high-intensity arcs employing suprex carbons—HI-50/100, 50 amp. continuous, 100 amp. changeover; HI-70/140, 70 amp. continuous, 140 amp. changeover.

80 VOLT ("Transverter" HIH): Three sizes for suprex carbon arcs and spotlight arcs, in continuous and changeover ratings of 50/100, 70/140, 100/200.

MA SPECIAL "TRANSVERTER": 80, 85 and 90 volts, with ampere ratings as required for motion picture projection and spotlight equipment in combination.

CONDENSER TYPE LAMP SUPPLY: CP "Transverter," 100 volts for straight high-intensity motion picture projection lamps and spotlights; ampere ratings according to requirements.

DOMESTIC DISTRIBUTION: National Theatre Supply branches.

EXPORT: National Theatre Supply Export Dept., 92 Gold St., New York 7, N. Y. Canadian distribution: General Theatre Supply Offices.

Movies that are as
Smooth as Velvet
with GARVER Rectifiers

Single phase is the logical, most economically installed power source for your Drive-In Theatre. Install Garver S.P.-80 Rectifiers. Proved unquestionably, with over two years' service, in hundreds of Drive-Ins. Smoothness unexcelled by any type of equipment. Thoroughly dependable and economical to operate. One of the following types will admirably meet your requirements: SP-60, 3P-60, SP-80, 3P-80.

Garver Electric Co., Union City, Indiana

Dependable Rectifiers since 1915

HEYER-SHULTZ, INC., Cedar Grove, N. J.

Metal projection arc lamp reflectors.

MODEL 1400A: For Peerless Magnarc, Strong Mogul, Ashcraft Suprex Models E & D, Forest Universal, Morelite Monarc. Recommended for maximum light distribution.

MODEL 1434: For same lamps as Model 1400A, when 7/8mm trim is used. Has longer focal length for maximum spot concentration.

MODEL 1336A: For Brenkert Enarc lamps.

MODEL 1137A: For Simplex High, Strong Intermediate High.

MODEL 1025A: For Peerless Low-Intensity.

MODEL 1025: For Strong Utility High and Utility A. C. and Mogul (early model); Simplex Acme High, Morelite Sunlite.

Reflectors for other applications made to order. Also available are **pin-hole aperture plates** for **testing optical alignment.**

(ALSO SEE PAGE 54)

DOMESTIC DISTRIBUTION: National Theatre Supply branches and dealers marked with asterisk.

EXPORT: National Theatre Supply, Export Dept., 92 Gold St., New York 7, N. Y.; RCA International Division, 745 Fifth Ave., New York 22, N. Y.

IMPERIAL ELECTRIC CO., Akron, Ohio.

Motor-generators.

Motor-generator rectification equipment for supply of d.c. current to all types and capacities of motion picture projection arcs.

(ALSO SEE PAGE 9)

DISTRIBUTION: Direct.

INTERNATIONAL PROJECTOR CORP., 55 La France Ave., Bloomfield, N. J.

Projectors, magazines, sound systems, in-car speakers, pedestals.

PROJECTIRS: Simplex X-L professional models. Simplex E-7, and Super-Simplex—professional models and Simplex Type SP semi-professional 35m sound reproducing equipment.

SOUND SYSTEMS: Simplex X-L sound system including soundhead and amplification units in assemblies, with cabinet and control panel in power amplification ratings to cover all types and sizes of indoor and drive-in type theatre installations.

PEDESTALS: Four models including two with upward tilt for drive-in theatres.

IN-CAR SPEAKERS: With General Electric 4-in. PM speaker unit; cast aluminum housing, gray lacquer finish; straight or coiled cords; junction box with or without concession signal and post light; Simplex 1950 in-a-car speakers with straight or coiled cords, junction boxes with post and dome lighting.

MAGAZINES & ACCESSORIES: Upper and lower 35mm magazines; replacement parts and accessories for Simplex projectors and sound equipment.

DOMESTIC DISTRIBUTION: National Theatre Supply branches.

(ALSO SEE SECOND COVER)

Cable Address: PRESIMPLEX and NATHESUPPLY, New York. **EXPORT:** National Theatre Supply Export Dept., 92 Gold St., New York 17, N. Y.

KNEISLEY ELECTRIC CO., 2501-9 Lagrange St., Toledo 3, Ohio.

Tungar tube d. c. projection arc current rectifiers, projection lamp reflectors.

RECTIFIERS: Models for 110 or 220 volts—two 6-amp. tubes, 20 amp., single-phase; two 15-amp. tubes, single, four 15-amp. tubes, 40-42 d. c. amps, 27-28 volts, single; four 15-amp. tubes, 40-50 d. c. amps., 27-36 volts, single; series two for 80 d. c. amps. Four 15-amp. tubes, 56-62 d. c. amps., 38-40 volts, single; four 15-amp. tubes, 40-60 d. c. amps., 27-36 volts, 3-phase; six 15-amp. tubes, 56-70 d. c. amps., 38-40 volts, 3-phase; six 15-amp. tubes, 65-80 d. c. amps., 38-40 volts, 3-phase.

REFLECTORS: Glass 10¼ in. mirrors adapted to Peerless, Strong, Motiograph, Ashcraft, Preddey, Sunbeam, Powerlite and Brenkert Models E. and F.

DOMESTIC DISTRIBUTION: All theatre supply dealers, and direct.

CABLE ADDRESS: KELCO.

KOLLMORGEN OPTICAL CO., 2 Franklin Ave., Brooklyn 11, N. Y.

Projection lenses, soundhead optical units.

SUPER SNAPLITE: Speed f/1.9 for 35mm projectors, coated optics; sizes 2" to 4¾" in standard barrel 2.781" O.D.; sizes 5" to 7" in large barrel 4.00" O.D.

SERIES II SNAPLITE: speed f/2.0 for 35 mm projection, coated, sizes 3½ to 5 in.; at slightly slower speeds from 5¼ to 7 in.

SERIES I SNAPLITE: Coated or uncoated, sizes 2 to 7 in. in ¼-in. steps.

SOUNDHEAD OPTICAL UNITS: Straight and curved slits for 35mm and 16mm reproduction.

(ALSO SEE PAGE 71)

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Cable Address: KOLLMORGEN. **EXPORT:** National Theatre Supply, Export Dept., 92 Gold St., New York.

LaVEZZI MACHINE WORKS, 4635 W. Lake St., Chicago 44, Ill.

Projector and soundhead replacement parts.

PARTS AND SUB-ASSEMBLIES for Simplex, Motiograph, Powers' projector mechanisms; sprockets for various other projectors and sound units; tools for projector repairing. Also precision parts to specifications.

(ALSO SEE PAGE 74)

DISTRIBUTION: All theatre supply dealers.

MOTIOGRAPH, INC., 4431 W. Lake St., Chicago 24, Ill.

Projectors, sound reproducing systems, projection arc lamps, motor generators, drive-in theatre in-car speakers and amplification systems.

PROJECTORS: Model AA with cylindrical rear shutter, upper and lower magazines, and pedestal in same AA series; also **Model K** upper and lower magazines, and **Model S pedestal;** pedestals with upward tilt for drive-in theatres.

REGULAR THEATRE SOUND SYSTEMS, M9 Series soundheads and amplification in assemblies according to seating capacities from small to over 2800, single- and dual-channel.

DRIVE-IN AMPLIFICATION SYSTEMS: DR Series with projection room panel control; 4-, 6-, 10-amplifier systems for 400, 600, 1000 car capacities, respectively; 250w for 1000 cars; 500w dual amplification; 500w with dual pre-amplifiers, dual drivers, two 250w power amplifiers. Also two central speaker type systems—DR-A2X, 75w, 750 cars; DR-150, 150w for 1000 cars.

IN-CAR SPEAKERS: Available in durable plastic cases, with straight or coiled cable, with or without concession signal light.

REFLECTOR ARC LAMPS: Three models—1 kw., 46-ampere, 75-115-ampere.

MOTOR GENERATORS: Two models—70/140 amps. and 125/250 amps.

(ALSO SEE PAGE 4)

DOMESTIC DISTRIBUTION: Dealers 2, 7, 10, 14, 25, 32, 34, 36, 39, 41, 43, 52, 58, 60, 65, 69, 75, 84, 92, 102, 104, 110, 112, 119, 123, 128, 130, 132.

Cable Address: FRAZEN, San Francisco. **EXPORT AGENT:** Frazar & Hansen, Ltd., 301 Clay St., San Francisco 11. Also 120 Broadway, New York 5, N. Y.

NATIONAL CARBON DIVISION, UNION CARBIDE AND CARBON CORPORATION, 30 East 42nd St., New York 17, N. Y.

Projection carbons.

"NATIONAL" White Flame positive, and "Orotip" negative carbons for condenser-lamp high-intensity, to 170 amps.; Suprex cored positive and nebative carbons for reflector type high-intensity arcs to 70 amps.; also carbons for 16mm arc projection.

(ALSO SEE PAGE 35)

DISTRIBUTION: All theatre supply dealers.

NU-SCREEN CORP., 1501 Broadway, New York 18, N. Y.

Projection Screens.

GLASCREEN: Highly reflective, diffusive type; porous for full frequency sound transmission; washable, woven of Fiberglas, seamless.

(ALSO SEE PAGE 52)

DISTRIBUTION: National Theatre Supply.

PROJECTION OPTICS CO., 330 Lyell Ave., Rochester 6, N. Y.

Projection lenses.

SUPER-LITE LENSES: For 35mm projectors; Series III-C, III, 1A-C, 1A, 1-C, I. Also "Silver Superlite."

PROJEX LENSES: 8mm and 16mm auxiliary projection lenses; "Rochesterios" ½-in. and ¼-in. size for opaque projectors.

DOMESTIC DISTRIBUTION: All theatre supply dealers.
Cable Address: PROJEX.

RADIO CORP. OF AMERICA.

RCA VICTOR DIVISION, Theatre Equipment Section, Camden, N. J.

Sound reproducing systems, projectors, projection arc lamps, drive-in theatre in-car speakers.

REGULAR THEATRE SOUND SYSTEMS: Three basic types, each complete with rotary stabilizer soundheads, amplification, two-way horn systems—**PG-211S, PG-220-B** for small theatres; **PG-230, PG-230A, PG-234, PG-234A,** for medium-sized theatres; **PG-240, 242, PG-244, PG-246** for large theatres.

DRIVE-IN THEATRE SOUND SYSTEMS: Three basic amplification systems; **High Power Series: PG-270,** one cabinet type drive amplifier, one 70w power units; **PG-271** cabinet driver with two 70w power units; **PG-272** cabinet driver with four 70w power units; **PG-275** two-rack type drivers with two 70w power units; **PG-276** two-rack drivers with four 70w power units.

IN-CAR SPEAKERS AND JUNCTION BOXES: Die-cast aluminum housing with "Starlight" finish or natural aluminum finish. **Speakers—MI-9442K,** with neoprene-jacketed straight cord; **MI-9442AK** with Koiled-Kord; **MI-9442CK** with three-conductor theft-resistant cable; **MI-9442DK** with concession light switch and theft-resistant cable. **Junction Boxes—**

MI-9490K standard; **MI-9490AK** with built-in dual beam roadway and post light; **MI-9490AW** with translucent lighted cover and post and roadway lighting;

MI-9490DK with post and roadway lighting and electrical concession light.

PROJECTORS—Two basic types—RCA "100" for large theatres; double rear shutter, automatic lubrication, extra visibility in operating compartment and on gear side. RCA "60" for medium and small theatres; automatic lubrication, double (RCA "62") or single shutter.

D.C. CONDENSER ARC LAMPS: Brenkert "Supertensity" for 180-amp. National HiTex carbons.

D.C. REFLECTOR ARC LAMPS: Brenkert "Enarc" for regular suprex carbon trims **(R-10 Radarc** for 1-Kw operation); Brenkert **"Hi-Enarc"** for 9mm positive carbon, with water-cooled jacket.

DOMESTIC DISTRIBUTION: Theatres supply dealers marked with asterisk on page 10.

EXPORT: RCA International Div., 745 Fifth Avenue, New York City.

J. E. ROBIN, INC., 267 Rhode Island Ave., East Orange, N. J.

Motor-generators, rectifiers, d. c. for projection arc supply.

ROBIN-ESCO SUPER POWER: Motor generators, 50 to 400 amperes.

RECTIFIERS: Selenium type, 3- and 6-phase, all regular projection arc amperages; 22x14 in., 32 in. high; approx. ship. wt. 120 lbs.

(ALSO SEE FOURTH COVER)

DOMESTIC DISTRIBUTION: Unaffiliated dealers.
EXPORT ADDRESS: JEROBIN.

B. F. SHEARER CO., 2318 Second Ave., Seattle 1, Wash.

Motion picture screens.

"CYCLORAMIC" screens of three-ply porous fabric (unperforated).

(ALSO SEE PAGE 55)

DOMESTIC DISTRIBUTION: Franchise theatre supply dealers.

EXPORT AGENT: Frazer & Hansen, Ltd., 301 Clay St., San Francisco 11; distributed in Canada by Dominion Sound Equipment branches.

STRONG ELECTRIC CORP., 87 City Park Ave., Toledo, Ohio.

Projection arc lamps, reflectors, rectifiers, spotlights.

LAMPS: High-Intensity—"Utility" 1kw. "Junior High" 1kw.; "Utility" 46-amp.; "Mogul" 70-amp.; "Mighty-Ninety" 80-125 amp. **Low-Intensity**—"Utility" 18-30 amp.; portable 15-18-amp. For longer arc protection—"Junior High" 16mm high-intensity.

RECTIFIERS: Tungar tube equipment in 40-amp., single-phase; 50-amp. single- and 3-phase; 65-amp., 3-phase; 80-amp., single- and 3-phase; 90 amp. single and 3-phase for single trim lamps and in 15 (portable), 20 and 30 amps.

REFLECTORS: Elliptical glass mirrors for all standard reflector arc projection lamps.

SPOTLIGHTS: Carbon arc automatic high-intensity light projectors mounted on pedestal for flexible follow of performance, adjustable from spot to flood.

(ALSO SEE PAGE 53)

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Cable Address: STRONGLAMP. **EXPORT:** Export mgr., home office.

TELESONIC THEATREPHONE CORP., 3 E. 48th St., New York 17, N. Y.

Theatre hearing aid equipment.

TELESONIC SYSTEM consists in low-voltage wires forming a network connected to theatre sound amplifier, producing a magnetic field of identical pattern; seats are not wired; deafened patron "tuns in" on field through small thermionic amplifier and can sit anywhere in auditorium.

(ALSO SEE PAGE 39)

DISTRIBUTION: Direct.

NOW! f/1.9 7 EVEN IN 7 INCH FOCAL LENGTH!

for the LATEST PROJECTORS!

The newest projectors can take larger lenses. Here is the lens designed specifically to achieve top performance with these modern projectors—the sensational *four inch diameter* Super Snaplite. Speed of f/1.9 from 5 through 7 inch focal lengths, in ¼ inch steps.

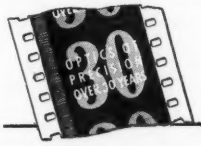
MORE LIGHT...the four inch diameter Super Snaplite gives you an f/1.9 lens in focal lengths as long as 7 inches!

LONG LIFE...one piece mount, specially sealed lens elements, anodized finish that can't flake off—all spell longer, top-notch performance for the four inch diameter Super Snaplite!

SHARPER PICTURES...a true anastigmat lens for longer throws—the four inch diameter Super Snaplite produces pictures wire-sharp right to the very corners!

HIGHER CONTRAST...anti-reflection coatings further enhance the brilliant, crisp, sparkling pictures projected by the four inch diameter Super Snaplite!

Four inch diameter Super Snaplites are available, to order, in focal lengths from five up through seven inches, in quarter inch steps. In all these focal lengths the true effective speed of f/1.9 is maintained. Four inch diameter Super Snaplites are also available, to special order, in focal lengths longer than seven inches, at somewhat slower speeds.



Get the full facts of this superlative new lens now—write for your copy of Bulletin No. 209 today!

"You Get the Most Uniform Light With Super Snaplite"

KOLLMORGEN Optical CORPORATION

2 Franklin Avenue
Brooklyn 11, New York

VOCALITE SCREEN CORP., 19 Debevoise Ave., Roosevelt, N. Y.

Projection screens.

MATTE WHITE, DIFFUSIVE, PERFORATED: Vinyl Plastic coated fabric for HI-INTENSITY projection: Audio-Lite, Super-Lite, Suprex, New, All Plastic screen "Super-Wite."

BEADED-CRYSTALITE: Glass beaded porous fabric: Vocalite and Perma-Lite (rated sound attenuation 2db).

RESURFACERS: Chromoloid white coating, plastic base, flameproof; Silverlite metallic base paint for silverscreen surface.

UPHOLSTERY: Plastic Seat: Washable, flame resistant "Plasticover."

(SEE ALSO PAGE 74)

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Cable Address: VOCALITE, Freeport, N. Y. **EXPORT:** Home office.

WALKER AMERICAN CORP., 800 Beaumont St., St. Louis, Mo.

Projection screens.

PERFORATED SCREENS in three types—vinyl base plastic moulded white; plastic moulded silver; coated fabric white.

DOMESTIC DISTRIBUTION: National Theatre Supply branches.

EXPORT: National Theatre Supply, Export Dept., 92 Gold St., New York.

WEBER MACHINE CORP., 59 Rutter St., Rochester, N. Y.

35mm sound-projector systems.

SOUND PROJECTOR: "Syncrofilm" unified projector mechanism and soundhead.

AMPLIFIERS: Rack-mounted main amplifier, rated 22w undistorted output, with monitor and d. c. exciter lamp supply; adapted to dual channel operation; overall dimensions 21x14 in. and 30 in. high; ship. wt. approx. 60 lbs.

DOMESTIC DISTRIBUTION: J. E. Robin, Inc., 267 Rhode Island Ave., East Orange, N. J.

EXPORT: Robin (cable JEROBIN).

WENZEL PROJECTOR CO., 2905 S. State St., Chicago 16, Ill.

Projector mechanism, soundheads, pedestals, rewinders, projectors and sound head parts, projection accessories, amplifiers and speaker systems.

"ACE" PROJECTOR: 35mm mechanism with rear shutter; spiral gears, BB movement.

SOUND EQUIPMENT: Soundheads; soundhead sprockets; sprocket pullers, pin pushers, V-blocks; amplifiers and speakers for regular theatres; amplifiers for drive-ins.

PARTS: Rear shutters, double-bearing movements; parts for Power's 6B and other projectors, for low-intensity lamps and soundheads.

REWINDERS: Enclosed 35mm motor-driven; hand models for 35mm, 16mm, 8mm; rewind dogs and pulleys.

REPAIR TOOLS: Reamers, punches, hammers, intermittent and mechanism running-in stands and drives.

MAGAZINES: Standard model, 16- and 18-in; "Deluxe" 18-in; also 24-in, and upper magazines for Power's projectors.

PEDESTALS: Five-point L-type base (**WB-600**).

(SEE ALSO ADJOINING COLUMN)

DOMESTIC DISTRIBUTION: Authorized theatre supply dealers.

WESTINGHOUSE ELECTRIC CORP., Lamp Division, Bloomfield, N. J.

Filament projection lamps (mazda), exciter lamps.

Filament projection light sources for operation on standard line voltage, 100-1500 watts; biplane filament lamps with medium prefocus base requiring forced ventilation, 300-1000 watts.

Photocell exciter lamps in standard types.

DISTRIBUTION: Theatre supply dealers, or consult nearest Westinghouse Lamp Div. office.

WESTREX CORP., 111 Eighth Ave., New York 11, N. Y.

Manufactures sound reproducing and recording equipment; distributes complete theatre equipment outside U. S.

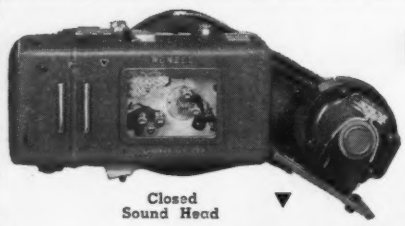
FOR LARGE THEATRES: "Master" and "Advanced" series, with amplification and two-way horn systems to serve all capacities; soundhead of each has hydro-flutter suppressor, magnetic type film tension governor, plug-in pre-focus exciter; cabinet amplifier with driver and separate monitor amplifier; main amplifiers 40w, 50w, 100w.

FOR SMALL THEATRES: Three systems with 15-watt amplifier, wall or floor mounted; simplified soundhead having hydro-flutter suppressor; speaker assembly or two-way horn system according to acoustic conditions and capacity.

COMPLETE SOUND SYSTEMS: Three series—**Master,** deluxe style for all sizes of theatres; **Advanced,** medium price range for all sizes of theatres; **Standard,** for smaller theatres. All systems with "Hydro Flutter Suppressor" in soundhead; amplifiers mounted in floor type cabinets; speaker systems including Western Electric theatre loudspeakers.

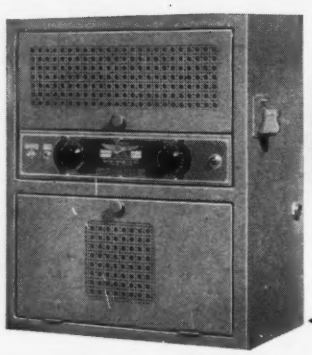
SOUNDHEADS: Designed for use with leading makes of projectors; "Hydro Flutter Suppressor" reduces mechanical flutter to only .07%; constant film speed maintained by "Electro-Tension Governor" operating on magnetic principle; "Equilight Diffuser" for equal illumination of photocell for both variable density and variable area recordings; plug-in pre-amplifier mounted on chassis, push-button changeover, straight line drive, hand wheel for threading.

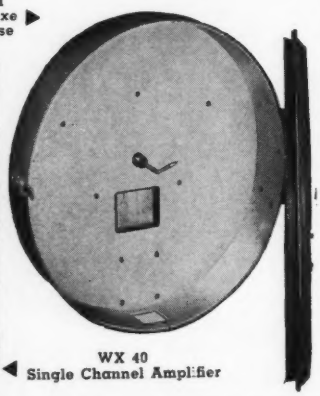
AMPLIFIERS: Complete series of units with output 15w to 100w; mounted with rectifiers, control and meter panels in floor cabinets with illuminated white enamel interior; harmonic distortion rated 1% over



HEADQUARTERS
for Time Tested
Theatre Equipment

Pro - 31
18" DeLuxe
Deep Case





Manufacturers of:
Projectors, Sound Heads, Bases, Magazines, Sound Systems, Replacement Parts, Accessories, etc.

Send for Descriptive Literature

WX 40
Single Channel Amplifier

WENZEL PROJECTOR CO. 2505-19 S. State St. Chicago 16, Ill.

SEAMLESS FLEXIBLE

WILLIAMS
Tear-Proof
SCREENS

TOUGH SOLID-PLASTIC

WILLIAMS SCREEN CO.
1675 Summit Lake Blvd. Akron 7, Ohio

1000 cycles, 2% at extreme low end; separate fuse and switching panel controls power line circuits; power supply panel each amplifier; rectifier for each exciter lamp; switch for emergency operation on a.c.; monitor amplifier separate unit with provisions for hearing aids, accessory speakers, monitor. 100w amplifier a single unit with straightforward class "A" push-pull stages.

HORN SYSTEMS: Five systems. High-frequency units for auditorium coverage 50°, 80°, 100°; speaker units include 754A low-frequency speaker, 713B high-frequency unit associated sectoral horn.

SOUND SYSTEMS ATTACHMENTS: non-synchronous turntable; hearing aid; projection room and stage announcing.

PUBLIC ADDRESS: Systems for all sound reinforcement purposes using components made principally by Western Electric Co.

(ALSO SEE PAGE 7)

BRANCH: Hollywood Division, 6601 Romaine St., Hollywood 38, Calif.

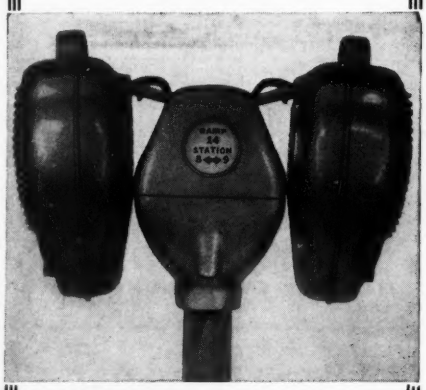
Speaking of Speakers . . . .

EVERYONE BLOWS HIS OWN HORN!

It's easy to say "greatest speaker value", lowest cost quality speaker", "most spectacular value", or make other superlative claims . . . BUT a tiny, tinny, toy speaker is no bargain even if you got it for nothing.

Buy a Pair of S. O. S. "CO-OP" speakers and compare with any speaker at any price . . .

BE CONVINCED!



$16 BUYS 2 speakers and a junction box complete

No other speaker can make all these claims:

(1) Large 6" cone for greater volume and tone quality.
(2) Die cast Aluminum Alloy housing with 3 different handles.
(3) Junction Box has 2½" illuminated bulls-eye showing ramp and station number.
(4) Post down light prevents accidents.
(5) Speaker cone protected by perforated disc—even a pin can't penetrate.
(6) Volume control knob without screws—prevents tampering.
(7) L-Pad volume control means operation of 1 speaker does not affect any of the others.
(8) Simplified thumb screw binding post connections means quick and simple installations.

S.O.S. CINEMA SUPPLY CORP.
Dept. A, 602 WEST 52nd St., N. Y. 19

DISTRIBUTION: Westrex sound reproducing equipment and complete theatre equipment of other manufacture, distributed outside U. S. only, through subsidiaries in principal countries. (Recording equipment distributed throughout world including U. S.

WILLIAMS SCREEN CO., 1679 Summit Lake Blvd., Akron 7, Ohio.

Motion picture screens.

WHITE and **SILVER** seamless screens to 20x25½ ft.

(ALSO SEE PAGE —)

DOMESTIC DISTRIBUTION: The Ballantyne Co., 1707 Davenport St., Omaha, Neb., or direct.
EXPORT AGENT: Streuber & LaChicotte, 1819 Broadway, New York 23.

(For Seating see Auditorium Chairs)

Stage Rigging And Curtain Controls

AUTOMATIC DEVICES CO., 116 N. 8th St., Allentown, Pa.

Curtain control equipment.

CONTROLS: No. 145, ⅓-h.p. resilient for medium wt. curtains, track to 50 ft.; **No. 290,** ½-h.p. for heavy curtains, track over 50 ft.; **No. 93 "Junior,"** ¼-h.p. track to 40 ft. Also steel machine stand, 22 in. high.

TRACK: Two types of 14-gauge steel, Nos. 280 and Special 250 for any wt. or span; No. 170 for medium curtains, tracks to 36 ft.

(ALSO SEE PAGE 75)

DISTRIBUTION: All theatre supply dealers.

Cable Address: GERKINETO. **Export Office:** 220 W. 42nd St., New York.

J. R. CLANCY, INC., 1010 W. Belden Ave., Syracuse, N. Y.

Stage hardware and rigging.

COMPLETE MECHANICAL EQUIPMENT FOR STAGES: Including rigging, hardware, asbestos and other curtains and draperies, with stage installation design service.

ELEVATORS: Designed and built to specifications, for lifting orchestra or consoles into pit or on to stage.

DOMESTIC DISTRIBUTION: Direct.

Cable Address: CLANCYCO. **EXPORT:** Westrex Corp., 111 Eighth Ave., New York 11, N. Y.

VALLEN, INC., 225 Bluff St., Akron, Ohio.

Curtain control equipment.

CONTROLS AND TRACKS for every curtain operating need. Multiple Drape Operators. Equipment for preview rooms, wall curtains, panorama windows, glass wall curtains. Midget Operators.

(ALSO SEE ADJOINING COLUMN)

DISTRIBUTION: All theatre supply dealers and scenic studios.

Ticket Sales and Admission Control

BRANDT AUTOMATIC CASHIER CO., Watertown, Wis.

Coin changing equipment.

SINGLE KEY TYPE (Model 201): Depression of one key makes change from penny to a dollar, inclusive. Coins roll on edge quickly and with minimum clatter down delivery chute to cup. Chute may be set at any point within radius of 180°.

PENNY KEY TYPE (Model 131): Basic features of Model 201, but of simpler design for lower price. Penny delivery requires depression of second key.

DOMESTIC DISTRIBUTION: Through appointed sales representatives; direct inquiries to manufacturer

COINOMETER CORPORATION, 30 East Adams St., Chicago 3, Ill.

Coin changing machines.

MODEL '52 "A": Direct-paying type, with integral penny keys, combining odd amounts in one operation; also four special keys for split change of 10, 25, 50 cents and dollar.

MODEL '52 "B": Changer type, requiring only depression of keys of admission price; keys arranged by color for changing dollar, 50c, 25c or 75c, and penny change.

MODEL '52 "D": For operations requiring no pennies; otherwise direct changer type like Model "B."

DOMESTIC DISTRIBUTION: Authorized dealers (name for specific territory on request from manufacturer).

GENERAL REGISTER CORP., 36-20 33rd St., Long Island City 1, N. Y.

Admission Control Equipment.

ELECTRIC TICKET ISSUING MACHINE: Motor-driven, automatic issue, 1 to 5 tickets from each unit simultaneously or individually; constructed in units, with housing accommodating 1 to 5; deal plate dimen-

DESIGNED FOR THE NEEDS OF *Tomorrow!*

MODERN AS TOMORROW'S REQUIREMENTS MAY BE . . . VALLEN, WORLD'S LEADING DESIGNER AND MANUFACTURER WILL SOLVE YOUR STAGE PROBLEM

WRITE US! Our engineers will advise you promptly. No obligation!

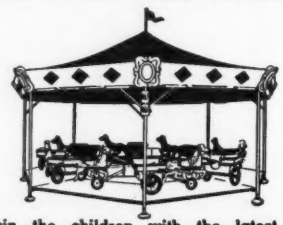
Vallen, inc.
AKRON, OHIO

THEATRE EQUIPMENT & SUPPLIES Bazaar

AMERICA'S Foremost SCREENS

VOCALITE SCREEN CORP.
ROOSEVELT, N. Y., U. S. A.

DRIVE-IN THEATRES
Increase Your Family Patronage!



Entertain the children with the latest kiddie riding devices. Complete line of miniature trains, auto rides, pony rides, and airplane rides. Immediate delivery. Terms arranged.

KING AMUSEMENT CO.
Mt. Clemens, Mich.

SUPER-SERVICE La Vezzi
PRECISION MADE
PROJECTOR PARTS

Once you've used them, you'll agree that the built-in precision and trouble free performance of La Vezzi parts do much to hasten repair jobs and help you to the better projection that delights patrons. Specify La Vezzi SUPER-SERVICE Parts for all your replacements! Your Theatre Supply Dealer has them.

LA VEZZI MACHINE WORKS
4636 WEST LAKE STREET • CHICAGO 44, ILLINOIS

LEARN MODERN THEATRE MANAGEMENT

Advance by special training which will qualify you for the better theatre positions. Start now through modern training. Free catalog. Est. 20 years.
THEATRE MANAGERS INSTITUTE
380 Washington Street
Elmira, New York, U. S. A.

OUTDOOR REFRESHMENT CONCESSIONAIRES
FROM COAST TO COAST
OVER ¼ CENTURY
NOW SPECIALIZING IN REFRESHMENT SERVICE FOR DRIVE-IN THEATRES
SPORTSERVICE Corp. JACOBS BROS.
703 MAIN ST. • BUFFALO, N. Y. • WA. 2506

CHAIR
Supply Headquarters

We Supply Replacement Parts for All Makes of Chairs

Send a sample & quantity desired—we'll gladly quote by return mail.

"Everything for All Theatre Chairs"

Aisle Lights
Backs
Brackets
Hardware
Leatherette
Seats
Standards
Used Chairs
and all other Parts.

FENSIN SEATING COMPANY
1137 S. Wabash Ave. Chicago 5

BETTER THEATRES *is published every month as a bound-in section of Motion Picture Herald (first or second issue of the month) . . . and in a yearly Market & Operating Guide Number published in March under its own covers, going to all subscribers as Section 2 of the Herald.*

GEORGE SCHUTZ, EDITOR

sions—12 in. wide, 1 to 3 units; 18 in. 1 to 3. Ship. wt. from 135 (1 unit) to 190 lbs.

MECHANICAL TICKET ISSUING MACHINE: Same design and dispensing as above, but by mechanical action.

TICKET CHOPPER: Doormen's collecting machine, electrically operated.

TICKET CHOPPER: Motor-driven.

TICKET CHOPPER: Electric automatic collection receptacle that cuts tickets in two and files stubs in sequence on linen sinew; 17 in. wide, 16 in. deep, 45 in. high; ship. wt. 215 lbs.

STUB ROD BOX: Manually operated ticket collection machine, with action similar to electric equipment; 17 in. wide, 14½ in. deep, 42 in. high; ship. wt. 160 lbs.

BRANCHES: 1018 Wabash Ave., Chicago 5; 335 North Taylor Ave., Montebello, Calif.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

THEATRE CONTROL CORP., 319 Orleans St., Detroit 7, Mich.

Automatic ticket checker.

"TICOGRAPH"—positive admission control designed to eliminate ticket manipulation and embezzlement. Device automatically counts and destroys tickets used for admissions, records the order in which each ticket was destroyed and reports all resold or unauthorized tickets. Tamper-proof mechanism sealed in anodized, extruded aluminum cabinet.

DOMESTIC DISTRIBUTION: Direct.

Uniforms

MAIER-LAVATY CO., 2141 Lincoln Ave., Chicago, Ill.

Theatre staff uniforms.

Complete coat and trouser uniforms, caps, for ushers, doormen, ticket-takers. Uniform topcoats and overcoats for doormen. Jacket and skirt uniforms, dresses for usherettes. Cashier jackets in two-ply 10 oz. all wool worsted tropicals, 13 oz. gabardines and 14 and 15 oz. serges.

DISTRIBUTION: Direct.

MARCUS RUBEN, INC., 625 S. State St., Chicago 5, Ill.

Uniforms, wool and washable.

All types of uniforms, both wool and washable. Uniforms for doormen, ushers, usherettes, cashiers, concessions, porters and all other theatre personnel.

DISTRIBUTION: Mail-order and direct representatives.

(ALSO SEE PAGE 45)

(For Vacuum Cleaners see Maintenance)

Water Coolers

EBCO MANUFACTURING CO., Town & Lucas Sts., Columbus, Ohio.

Electric water coolers and drinking fountains.

MODEL BE - 2: Bottle type cooler with Kelvinator refrigeration unit; 15½x15½-inch floor space; shipping wt. 145 lbs. domestic, export 190 lbs.

MODEL BE - R: Bottle type with Kelvinator-refrigerated compartment; 15½x15½-inch floor space; shipping wt. 160 lbs. domestic, export 210 lbs..

MODEL PE - 5: Pressure type, 5-gal. storage, with bubbler; Kelvinator refrigeration; 15½x15½; domestic wt. 150 lbs., export 195 lbs.

MODEL PE - 10: Pressure type, 10-gal.; bubbler; 15½x15½; domestic wt. 160 lbs., export 205 lbs.

MODEL PE - 10 - 255: Same as PE - 10, with bubbler fountain mounted on one side at child height.

MODEL PE - 20 - H: Pressure type, 20-gal., with bubbler; Kelvinator refrigeration; 22¾x21; domestic

wt. 305 lbs., export 410 lbs.; also available 115-230 volts, d.c.; also 25 cycle.

MODEL PE - 20 - H - 255: Same as PE - 20 - H, with bubbler fountain mounted at child height on one or two sides.

MODEL PE - 3R: Pressure type, 3-gal.; bubbler; Kelvinator refrigerated compartment; 12½x12½ inch floor space; shipping wt. 180 lbs., export 225 lbs.

ACCESSORIES: Wall bubbler fountains, glass fillers, bubbler valves, pressure regulators, current reduction, transformers, etc.

DOMESTIC DISTRIBUTION: Franchise distributors.

Cable Address: EBCO. **EXPORT:** Nash-Kelvinator Corp., Export Dept., 14250 Plymouth Rd., Detroit 32.

GENERAL ELECTRIC CO., Air-conditioning Dept., Bloomfield, N. J.

Water coolers.

PRESSURE BUBBLER COOLER: Model 6-GPH, large cooling reservoir, angle stream bubbler operated by foot pedal; glazed white vitreous china top; cap. 6 gal. per hr. **Model 10-GPH,** cap. 20 gal. per hr.; available with open type refrigeration unit.

DOMESTIC DISTRIBUTION: Authorized electrical and water cooler supply dealers.

Cable Address: INGENETRIC. **EXPORT:** International General Electric Co., 570 Lexington Ave., New York.

Ventilation of the Projection Room

ALTHOUGH data indicates there is no serious physiological danger in even a poorly ventilated projection room, it is entirely advisable to provide reasonably *comfortable* working conditions for the projection personnel. The lamphouse in operation produces heat which, if not adequately carried off by ventilation, will raise the room temperature beyond operating comfort.

The amount of room ventilation necessary is closely related to the amount of air moving through the lamphouse. A study has been made by the National Carbon Company of the effect of the draft through the lamphouse on the concentration of nitrogen oxides in the booth, and the amount of booth ventilation which *must be provided* in order to maintain temperature rises of

Room Temperature Rise—degrees F	Flue Ventilation—cfm	Room Ventilation—cfm (2 lamps*)	Nitro. Oxides (parts†)
5	0	2130	0.87
5	15	1810	0.26
5	50	1300	0.00
5	100	920	0.00
10	0	1090	1.76
10	15	905	0.51
10	50	650	0.00
10	100	460	0.00
15	0	727	2.64
15	15	603	0.77
15	50	433	0.00
15	100	307	0.00
20	0	545	**3.53**
20	15	452	1.01
20	50	325	0.00
20	100	230	0.00

*Two lamps alternating. †Parts in room per million parts of air.

Top Performance...

all the time

—with the RCA Sound Parts Plan

NOW, for a few pennies a week per car station, you can be sure that all RCA in-car equipment in your Drive-In will operate at peak efficiency *all the time.*

Under this Plan, RCA Service Engineers check your installation regularly. They restore every speaker or junction box that fails during normal operation. They replace faulty speaker mechanisms and components with brand-new RCA units. If a speaker must be returned to an RCA Service Center for repairs, RCA furnishes the shipping container—and pays the transportation charges both ways. Repairs to spare speakers are included at no extra charge.

Available to every drive-in theatre equipped with RCA In-Car speakers and junction boxes, the RCA Sound Parts Plan takes the worry, work, and unexpected expenses out of in-car equipment maintenance. Service is fast and efficient. Rates are surprisingly low—and can be arranged on a weekly or monthly "seasonal" basis to meet your needs.

Write at once for free new folder, No. 2W-6006

HOW THIS PLAN HELPS YOU

- Relieves you of the work and worry of keeping your in-car equipment operating all the time.
- Provides fast and reliable service.
- Eliminates need for ordering and stocking parts.
- Does away with costly unexpected parts replacements.
- Cuts repair and transportation expenses.
- Adds longer life to your equipment.
- Helps you budget upkeep costs.

RCA SERVICE COMPANY, INC.
A RADIO CORPORATION of AMERICA SUBSIDIARY
CAMDEN, NEW JERSEY

Market Data on Refreshment Vending Equipment and Supplies are in the Theatre Sales Section Beginning on page 79.

NEW • IMPROVED **ADC** FLOOR PULLEYS

They're ADJUSTABLE up to 26 inches!
To increase or decrease rope tension

simply release thumb screw and lower or raise the pulley wheel. Sturdy, ball-bearing construction. No. 1 for use with BESTEEL Curtain Track. No. 2 for use with SILENTSTEEL Track.

Write For Information

These new, adjustable pulleys are furnished as accessories with ADC Curtain Track *at no extra cost!*

Automatic Devices Co.
116 N. 8th Street, Allentown, Pa.

SEE THIS SHOWMAN MODEL NOW AT

PROFITS POP!

WITH NATIONAL'S NEW

Popcorn Fountain

New type Popping Plate
POPS MORE CORN!

Stainless Steel — Counter Style
SELLS MORE PEOPLE!

National's Popcorn Fountain
MAKES MORE PROFIT!

NATIONAL THEATRE SUPPLY

"EVERYTHING FOR THE THEATRE"

5°, 10°, 15°, and 20° Fahrenheit in a projection room using suprex carbon trims. The table below shows the effect of the rate of air flow through the lamphouse on the air required for adequate booth ventilation.

With poor conditions prevailing, such as no flue ventilation and only a room ventilation of 545 cfm, the booth temperature would rise 20°, and the nitrogen oxide content would be 3.53 parts per million. Those conditions might not be toxic, but they would be uncomfortable.

—GIO GAGLIARDI.

THEATRE LAW

(CONTINUED FROM PAGE 50)

Parking Lot Liability

A THEATRE operator is liable for injuries to a patron who drives his automobile into the operator's parking lot *if the testimony shows that the injuries resulted from failure of employes of the company to keep the lot in safe condition.* See Siegel *v.* Detroit (36 N. W. [2d] 719).

Also see Goodman *v.* Theatre Parking (286 Mich. 80). Here a theatre patron stepped out of a car on to some cinders and severely injured his leg. The court held:

"Operator of an automobile parking lot is not an insurer of the safety of its business invitees, but has a duty to maintain the premises in a reasonably safe condition and not expose patrons to danger in entering or leaving the lot or in alighting from cars...."

License Fees and Taxes

A CITY ordinance is valid of a motion picture theatre in due considera- which specifies a license fee for operation of the cost to the city of regulating motion picture theatres.

In other words, the primary object of a license tax is *to regulate and control a theatre.* If the amount of a license fee is grossly disproportionate, the taxing law *is void.* See Warner Bros. Theatres, Inc. *v.* Borough of Pottstown (63 Atl. [2d] 101), in which a higher court said:

"The license fee here can be justified, if at all, only under a proper exercise of the police power. One of the tests of propriety is whether the size of the license fee exacted has a reasonable relation to the borough's cost of regulating motion picture theatres. . . . Traffic regulation peculiar to the control of the patrons of a theatre, except under unusual circumstances, is the obligation of the municipality. . . . The present ordinance, in imposing taxes under the guise of licensee fees, so unreasonable in amount, is invalid."

RICHARDSON'S BLUEBOOK of PROJECTION

Standard Textbook of a Great, Growing Craft

$7.25 POSTPAID

KNOWN simply as "The Bluebook" among projectionists throughout the United States and in many other countries as well, this celebrated work has changed with the technics of the motion picture, with edition after edition, through more than three decades. The current edition — the Seventh — represents the latest established basic practices in projection and sound projection, and additionally contains four chapters on Theatre Television prepared specifically for projectionists. Leading projection engineers and supervisors of projection consistently recommend "The Bluebook" as an essential tool of the craft.

Published by the Quigley Publishing Company. . . . Send your order to—
QUIGLEY BOOKSHOP, Rockefeller Center, New York 20, N. Y.

UMI

ADVERTISERS *Alphabetical* INDEX

Reference numbers for use in inquiry post cards are given at left of advertiser's name. *NOTE: See small type under advertiser's name for proper reference number where more than one kind of product is advertised.*

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3	**AMERICAN SEATING CO.** Auditorium chairs. NTS and direct.	5
4	**ASHCRAFT MFG. CO., C. S.** Projection arc lamps. Unaffiliated dealers.	**Third Cover**
5	**AUTOMATIC DEVICES CO.** Floor pulleys (5A), curtain tracks (5B). Unaffiliated dealers.	75
6	**BALLANTYNE CO., THE** Complete projection and sound equipment (6A), drive-in construction and equipment plan (6B). Unaffiliated dealers.	33
7	**BERT, SAM.** Snow cone machines.	82
8	**BEST FOODS, INC., THE** Popping oils.	84
9	**BREUER ELECTRIC MFG. CO.** Vacuum cleaners. All dealers.	41
10	**CALI PRODUCTS CO.** Carbon savers. Direct.	68
11	**CARBONS, INC.** Projection carbons. Franchise dealers.	51
12	**CHICAGO HARDWARE FOUNDRY CO.** Electric hand driers (12A), tables (12B), stools (12C). Direct.	15
13	**CHICOPEE MFG. CORP. OF GA., LUMITE DIV.** Plastic upholstery materials. Direct.	19
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16	**DA-LITE SCREEN CO., THE** Screens. Direct.	57
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20	**F & Y BUILDING SERVICE, THE** Architectural design and building service.	62
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24	**GENERAL ELECTRIC CO., VACUUM CLEANER DEPT.** Vacuum cleaners. NTS and direct.	67
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29	**HELIOS CARBONS, INC.** Projection carbons. Direct.	17
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32	**IDEAL SEATING CO.** Auditorium chairs. Unaffiliated dealers.	20

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To Quigley Publications Service Department:

Please have literature, prices, etc., sent to me according to the following reference numbers in 1950 Market & Operating Guide—

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CITY..... STATE.....

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37—**KLIEGL BROS.** 66
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38—**KNOXVILLE SCENIC STUDIOS, INC.** 47
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39—**KOLLMORGEN OPTICAL CORP.** 71
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47—**NOVELTY SCENIC STUDIOS, INC.** 64
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49—**ONAN & SON, INC., D. W.** 45
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50—**POBLOCKI & SONS** 44
Theatre fronts (50A), marquees (50B), poster cases (50C), portable refreshment bar (50D), drive-in signs (50E). All dealers and direct.

51—**RCA SERVICE CO.** 75
In-car speaker maintenance.

52—**ROBIN, INC., J. E.** ..... **Fourth Cover**
Rectifiers. Direct.

53—**RUBEN, INC., MARCUS** 45
Uniforms. Direct.

54—**S. O. S. CINEMA SUPPLY CORP.** 73
Distributors.

55—**SHEARER & CO., B. F.** 55
Screens. All dealers.

56—**SIMONIN'S SONS, INC., B. F.** 40, 83
Popping oils. Direct.

57—**SMITH & SONS CARPET CO., ALEXANDER** 3
Carpeting. NTS and direct.

58—**SPENCER TURBINE CO.** 39
Vacuum cleaners. Direct.

59—**SPORTSERVICE, INC.** 74
Complete concession service.

60—**STRONG ELECTRIC CORP., THE** 53
Projection arc lamps (60A), rectifiers (60B), reflectors (60C). All dealers.

61—**TELESONIC THEATREPHONE CO.** 39
Hearing aids. Direct.

62—**THEATRE MANAGERS INSTITUTE** 74
Correspondence course in theatre management.

63—**TYPHOON AIR CONDITIONING CO., INC.** 61
Unit air-conditioners. Direct.

64—**VALLEN, INC.** 73
Curtain controls (64A), curtain tracks (64B). Franchise dealers.

65—**VOCALITE SCREEN CORP.** 74
Screens. All dealers.

66—**WAGNER SIGN SERVICE, INC.** 27
Changeable letter signs. Unaffiliated dealers.

67—**WELCH EQUIPMENT CO., INC.** 65
Combination insecticide fogging and general spraying equipment. Direct.

68—**WENZEL PROJECTOR CO.** 72
Soundheads (68A), amplifiers (68B), magazines (68C), projectors (68D). Unaffiliated dealers.

69—**WESTREX CORP.** 7
Foreign distributors.

70—**WILLIAMS SCREEN CO.** 72
Screens. Direct.

UMI

THEATRE SALES

- SELECTING ATTENDANTS
- SUPERVISION OF SERVICE
- SALES AND STOCK RECORDS

THE EQUIPMENT, SUPPLY & MERCHANDISE MARKET

UMI

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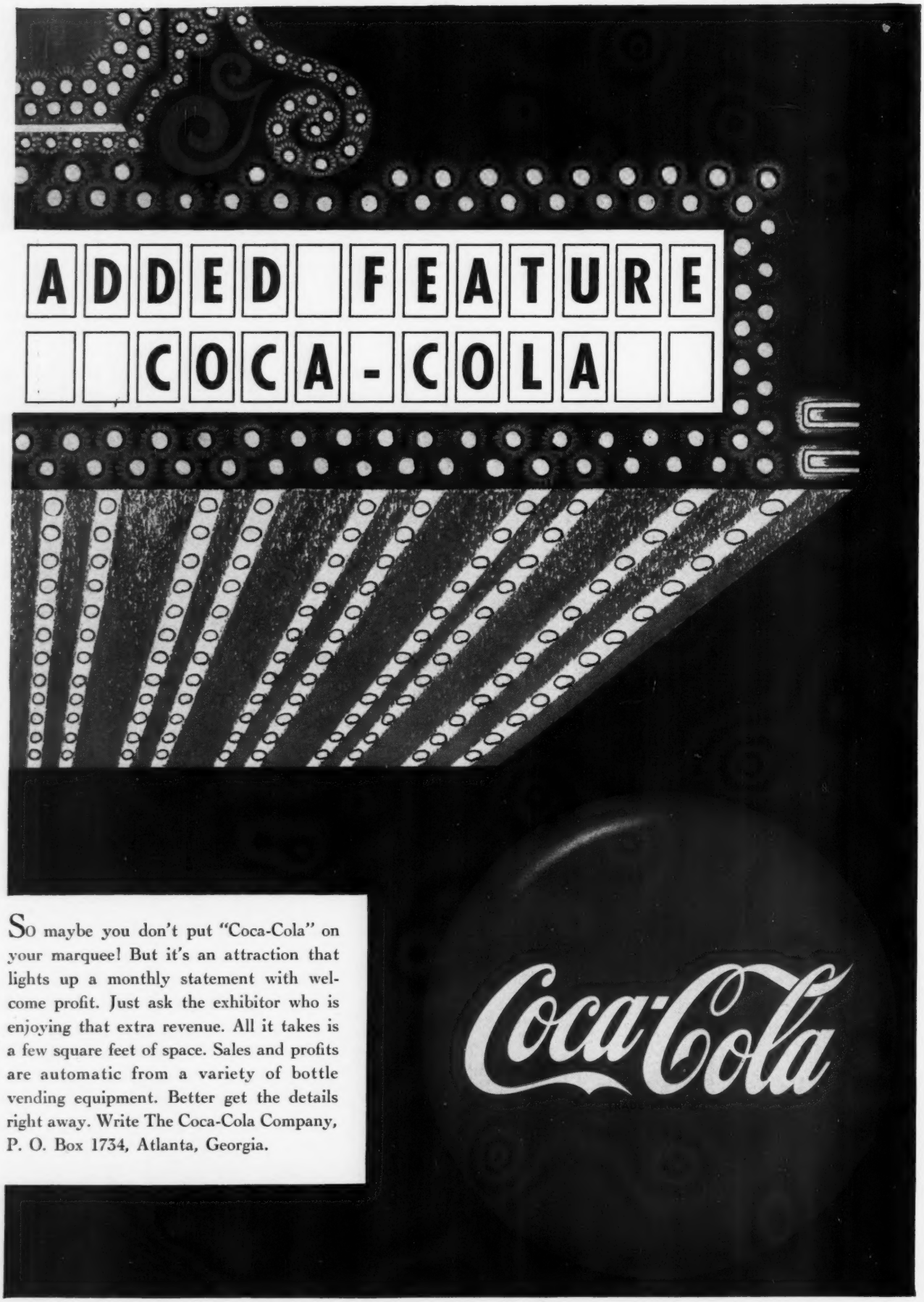

So maybe you don't put "Coca-Cola" on your marquee! But it's an attraction that lights up a monthly statement with welcome profit. Just ask the exhibitor who is enjoying that extra revenue. All it takes is a few square feet of space. Sales and profits are automatic from a variety of bottle vending equipment. Better get the details right away. Write The Coca-Cola Company, P. O. Box 1734, Atlanta, Georgia.

Coca-Cola

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Vending as a Division Of Theatre Operation

THEATRE sales of candy, popcorn and other refreshments are a complete and separate function and should not be administered in direct connection with the other, regular affairs of the theatre. Hence these two cardinal points:

1. Persons hired to handle the vending operation should be appraised and instructed according to the needs of this operation; not from the point of view of general theatre operation.

2. Bookkeeping and business administration of the vending operation should be entirely separate, and sales should be analyzed constantly.

Following is an account of an actual theatre sales operation exemplifying these principles. It has been prepared for THEATRE SALES *by Stanley A. B. Cooper, president of the Citizens Theatre Company of Brazil, Ind.*

The success of any business venture depends a great deal upon the calibre of the employes. In nearly every instance, a highly successful business is the result of employes who are highly competent, satisfied, well paid and ambitious to better their position by efficient work and increased sales.

Theatre owners who apply this rule to their vending operation will enable it to enjoy a maximum of revenue. Not only are gross sales increased, but the net profit therefrom is made greater.

To achieve the greatest possible revenue from the merchandising of refreshments, vending cannot be considered a step-child of theatre operation. If thus given secondary consideration, the cheapest help is hired on the grounds that it takes very little ability to operate a popcorn machine and to collect nickels and dimes. To the contrary, the vending operation should be given the same consideration as film rentals, attraction exploitation, the quality of projection and sound, and the standard of comfort.

We place the manager of the theatre in charge of the vending operation with instructions that he regard it as important as the sale of tickets at the box-office. Then we engage a person well suited to the requirements of selling candy and popcorn to our patrons. In most theatres vending is a one-employe operation. That employe is the key to increased sales and consistent high revenue.

We pay a basic wage based on an hourly rate. In addition, we pay a weekly bonus based on gross sales. The greater the sales, the more the employe makes. *This incentive means nothing, however, if the employee is not aggressive.*

Our counter men are all high school boys carefully selected through the co-operation of high school principals and teachers. The boys are chosen from a group of names submitted by the school. The list includes boys who get above average grades and who come from needy homes.

First these boys are given an apprenticeship in ushering. During this period we are able to observe their personalities, character and other qualifications of salesmanship. We thus have ample time to make a careful selection of those boys well suited to be counter men in our vending operations. Personal cleanliness is a basic criterion. The boy who keeps himself neat invariably keeps his counter and equipment clean.

Because they are of more than average intelligence, these boys are rapid workers and can handle rush hours with ease. They seldom miss a sale. *They have the knack of forcing slow items by shrewd suggestion. They know how to judge their output of corn to eliminate waste.* We weigh corn and oil each week and keep a chart on these figures to help the boy judge his proportions.

STORAGE AND INVENTORY

Once a week, on Saturdays, the vending facilities are given a thorough cleaning.

Each night the popcorn machine is emptied of all corn and waste and scoured.

Location and Display Of Vending Merchandise

In theatres of the Citizens Theatre Company, Brazil, Ind., the vending counter and sales area are placed as close to the ticket taker as the theatre floor plan permits; but inside the doors where the ticket taker is stationed so that patrons can come from the auditorium to make a purchase and return without asking for a stub.

Candy is displayed on staggered shelves against a wall, with the merchandise at eye level. This is considered superior by the circuit to a glass showcase display on the grounds that the latter can be seen only by persons standing immediately in front of it. The distance between counter and display is 3 feet—just enough for the counter man to work in.

All candy containing nuts are boxed in air-tight containers every night to protect it against vermin.

Supplies are stored in a ventilated room. We keep about 500 pounds of corn on hand (it is corn grown in Indiana and processed in a plant which "air-conditions" each kernel so that the amount of moisture is uniform). The corn is kept in moisture-proof bags, and from these it is poured into lard cans with tight lids, for use in each theatre.

Candy stocks are replenished each week, and each week's order usually represents a complete turnover.

SALES RECORDS

A separate sheet is kept for each theatre, showing (1) gross sales, (2) inventory, (3) percentage of sales to attendance, and (4) every item of expense.

The boys are given the figures on ratio of vending sales to theatre attendance so that each boy may compare his results with those at the other theatres. This maintains a competitive spirit among the counter men.

At the close of each day's operation, the boys make out sales slips on the day's business and place them in the money bags which they turn over to their managers. They also keep their own record of each day's sales so that when the vending operation is checked at the end of the week, their figures can be compared with the bookkeeper's figures as a double check.

UMI

Theatre Sales MARKET DATA

ACTON MANUFACTURING CO. INC., P. O. Box 643, Arkansas City, Kans.

Food Equipment.

PORTABLE CONTAINER: For hot or cold foods and beverages. Also made to dispense hot liquid. All-metal construction, insulated. Red baked enamel, or polished stainless steel finish. Removable sandwich tray. Cap. 9 gals. liquid; 24 six-oz. bottles.

VENDORS BASKETS: Holds 20 six-oz. bottles. Available with or without partitions. Holds drinks, candy, tobaccos, etc.; 12¾ ins. long, 10⅜ ins. wide, 11⅞ ins. high (to top of handle), 4⅝ ins. deep; all-metal, red baked enamel finish.

JUNIOR SIZE PORTABLE COOLER: For hot or cold beverages and food. Also made for dispensing hot liquids. Lightweight, streamlined design; all-metal construction. Cap. 12 six oz. bottles. Red baked enamel or polished stainless steel finish.

VENDING CART: Coca-Cola; Lightweight, all metal-construction. Space for hot and cold foods or beverages; warming oven built-in. Mounted on 10-in. ball-bearing wheels.

DOMESTIC DISTRIBUTION: Sold direct, except vending cart sold either through Coca-Cola bottling companies or direct.

ANDERSON & WAGNER, 8701 South Mettler St., Los Angeles 3, Calif.

Beverage dispensers, cooling and carbonation machines.

"EVERFROST" SODA BAR: Self-contained; dispenses two or three drinks; carbonated water precooled mechanically.

PRE-COOLING & CARBONATING MACHINE: 960-drink cap. up to four independent two-faucet dispensers can be operated.

DISTRIBUTION: Direct.

THE HAND LOCK POPCORN BOX IS NOW OBSOLETE

The amazing new automatic

"PUSH 'N' FILL" POPCORN BOX

pops open as you press the sides, the bottom of the box automatically forming and locking.

- SAVES TIME
- SAVES SPACE
- SPEEDS UP SALES
- INCREASES PROFITS

Direct sales mean lower prices to you! Made by America's largest manufacturer of automatic popcorn boxes, owners and operators of their own paper mills. Write today for free samples and price list. Sold only direct to the theatre. Shipped direct from paper mill to you.

Direct Mill Representative:

DROLL THEATRE SUPPLY CO.
925 W. JACKSON BLVD.
CHICAGO 7, ILLINOIS

BERT'S ELECTRIC AUTOMATIC SNOW MACHINE CO., P. O. Box 7803, Fair Park, Dallas, Tex.

AUTOMATIC SNOW CONE MACHINE: Grinds 12½ lbs. of ice, requiring 1½ minutes to shave. Machine compact, made of aluminum; wt. 130 lbs; overall ht. 54½ ins. with rod extended, 40½ ins. with rod down; 21 ins. wide, 18 ins. deep. Motor ½ h.p., 110 v., a.c. Counter space required 18 x 21 ins. Also available in 50 lb. cap. to supply park or fair.

(SEE ALSO RIGHT HAND COLUMN)

C. CRETORS & CO. INC., 620 West Cermak Road, Chicago 16, Illinois.

Popcorn machines.

SUPER 60 MODEL: Walnut cabinet, 28x48x63 ins.; 1 lb. all electric self-seasoning popping unit.

CADET MODEL 51: Stainless steel counter model with all-electric self-seasoning popper, capacity 6 oz. per popping.

HOLLYWOOD MODEL 48: Stainless steel cabinet, illuminated Lucite top, metered seasoning pump, filtered exhaust system, 16 oz. self-seasoning all-electric popping unit.

GIANT MODEL 41: Gas fuel portable popping unit with 2 lb. per popping capacity. Available with various cabinets.

(SEE ALSO PAGE 43)

DOMESTIC DISTRIBUTION: Farmer Boy Corn & Equip. Co., 352 West 44th Street, New York; Blevins Popcorn Co., 31st and Charlotte, Nashville; Charles E. Darden & Co., 308 S. Harwood, Dallas; Farmer Boy Corn & Equipment Co., 60 E. 13th St., Chicago; Walter E. Hugo, 5447 Hohman Ave., Hammond, Ind.; L & L Popcorn Co., 120 W. 18th St., Kansas City, Mo.; Poppers Supply Co., 72 P. O. Place, Salt Lake City; B. F. Shearer Co., 1964 S. Vermont, Los Angeles, 1947 N. W. Kearney, Portland 9, Ore., 243 Golden Gate Ave., San Francisco, 2318 S. Second Ave., Seattle; Superior Popcorn Co., 2015 Ingersoll Ave., Des Moines; Vendex, Inc., 701 S. Second St., Milwaukee; Wilkin Theatre Supply, 150 Walton St. N. W., Atlanta.

CABLE ADDRESS: CREKORN, CHICAGO.

COCA-COLA COMPANY, P. O. Box 1734, Atlanta, Ga.

BOTTLED COCA-COLA and **MACHINES** for vending.

COCA-COLA SYRUP and **MACHINES** for vending.

(SEE ALSO PAGE 80)

DOMESTIC DISTRIBUTION: Territorial franchise bottlers.

DRINCOLATOR CORP., 342 Madison Avenue, New York 17, N. Y.

THREE-DRINK DISPENSER: Serves 3 different cold beverages, two carbonated, one non-carbonated. Cap. 1500 drinks, 100 gal. per hr. Counter 42 in. high, 28 in. deep, 26½ in. wide.

DRIVE-IN TWO DRINK: 1,000 drink cap., two carbonated beverages.

DISTRIBUTION: Direct.

DROLL THEATRE SUPPLY CO., 925 W. Jackson Blvd., Chicago 7, Ill.

Popcorn boxes (direct mill representatives). **"PUSH 'N' PULL FILL" STYLE:** Opens by pressing sides, bottom automatically forming and locking.

(SEE ALSO LEFT HAND COLUMN)

HENRY HEIDE, INC., 313 Hudson Street, New York 13, N. Y.

Candy.

JUJYFRUITS: Chewy gum candies, assorted colors and flavors, in attractive box. Net wt. 1⅛ oz.; 24 boxes to ctn. Retails at 5c.

JUJUBES: Small pure gum candies in assorted colors and flavors. 1⅛ oz. in wax paper lined boxes; 5c pkg., 20 boxes to ctn.

LICORICE PASTILLES: Natural gum, licorice flavored (good for dry throat). 1⅛ oz. in wax lined box; 5c pkg., 20 boxes to ctn.

CHOCOLATE SPONGE: Double bar, unique porous center, chocolate coated. 1 oz. yellow and brown glassine wrap. 24 bars to box; retails at 5c.

BABIES: Chocolate flavored dairy cream type candy; small bite size pieces. Attractive pkg. wax paper lined. 1⅛ oz., 5c. box, 24 boxes to ctn.

JELLY BEANS: Tender, well flavored, in attractive cello pkg., assorted colors and flavors 1½ oz. 5c bags., 24 bags to box.

THE CHARLES E. HIRES CO., 206 South 24th Street, Philadelphia 3, Pennsylvania.

Root Beer.

FOUNTAIN SYRUP: Packed 4 gals. to case.

CARBONATED IN BOTTLES: 8 and 12 oz., 24 bottles to case; 26 oz. 12 bottles to case.

DOMESTIC DISTRIBUTION: Branches throughout United States and Canada.

LAMONT, CORLISS & CO., 60 Hudson Street, New York 13, N. Y.

Candy.

NESTLE'S CHOCOLATE BARS: 200 count pack available for theatre operations, in addition to regular pack 24's.

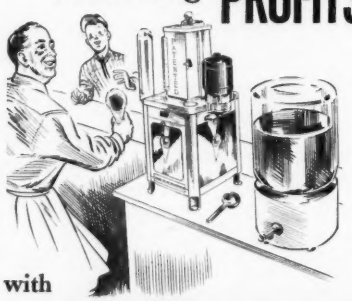
OTHER BAR CANDY: Nestle's Crunch, Milk and Almond bars, plus recently introduced Nestle's Peanut bar featuring Toasted Spanish peanuts blended with Nestle's Crunch.

MANLEY, INC., 1920 Wyandotte, Kansas City 8, Missouri.

Popcorn Equipment and Supplies.

POPPING MACHINE, STANDARD MODEL: Completely enclosed; porcelain and nickel finish; large capacity.

Make Big **PROFITS**



with

Bert's **ELECTRIC** *Automatic*

SNOW CONE MACHINE

★ It combines sparkling beauty with mechanical perfection. Is trouble-free and has large capacity. Many other exclusive features.

★ It grinds 12½ lbs. of ice in 1½ minutes. Can pay for itself in one day selling Snow Cones for a dime.

★ Press a button. The machine does the rest. Cost of Snow Cones less than 2¢, including ice, cup and flavor.

WRITE TODAY FOR FULL DETAILS

SAMUEL BERT, *Manufacturer*

P. O. Box 7803, FAIR PARK, DALLAS, TEXAS

POPPING MACHINE, DRIVE-IN MODEL: Capacity to 30 bushels of popped corn per hr. Heavy-duty unobstructed warming pan; warming oven; automatic seasoning well and pump; colored tubular illumination.

POPCORN SUPPLIES: Corn, seasoning, salt, bags and boxes.

(SEE ALSO PAGE 85)

MILLS INDUSTRIES, INC., 4100 Fullerton Ave., Chicago 39, Ill.

Vending Equipment.

CUP VENDOR MODEL 400-C: 400 drink cap.; 21⅜ ins. wide, 20⅞ ins. deep, 67⅛ ins. high; wt. 470 lbs. Tamper-proof vending stage mechanism; automatic coin changer. Front door servicing.

BOTTLE VENDOR, MODEL 120-B2: Cap. 120 bottles, pre-cools 51. 26⅜ ins. wide, 27¾ ins. deep, 80¾ ins. high; Ship. wt. approx. 700 lbs. Automatic coin changer. Front door servicing.

BOTTLE VENDOR, MODEL 66: Cap. 65 bottles, pre-cools 16. 21⅝ ins. wide, 21½ ins. deep, 67¾ high; Wt. 368 lbs. Automatic coin changer. Front door servicing.

ICE CREAM FREEZER: Refrigerated hopper, refrigerated side cabinet models. Continuous custard and batch ice cream freezer; for milk shakes, malted milks, soft ice cream, and regular batch ice cream. **Hopper Model:** 28 5/16 ins. wide, 34¼ ins. deep, 66 ins. high. **Side Cabinet Model:** 46 ins. wide, 34¼ ins. deep, 58⅞ ins. high. Hopper holds 3 gals. mix. Side cabinet holds two 10 gal. cans.

CANADA DRY GINGER ALE, INC., 100 Park Avenue, New York 17, N. Y.

Beverages and Dispensers.

CANADA DRY "IN-FOUNTAIN" DISPENSER: Provides proportional mix of beverage syrup and carbonated water in continuous flow; any size drink may be drawn without stirring. Requires no ice since, syrup pre-cooling chamber is submerged in fountain refrigeration compartment, occupying space of single syrup well. Adaptable to old or new fountains of any make. Unit measures 4⅜ ins. wide by 12 ins. deep. Available to qualified theatre operators on loan basis. Capacity more than one gallon of syrup, using any of Canada Dry's nine syrup flavors.

TYPE A DISPENSER (CANADA DRY): Delivers measured ounce of beverage syrup on press of button, reloads automatically. Also delivers continuous flow. Cap. standard gal. jug; 7¼ ins. square, 16 ins. high. Loaned to qualified theatre operators for use with any of Canada Dry's nine syrup flavors, with proper identifying decal on outer shell. Valve, nozzle and case of plastic; clamp padded to prevent marring of counters. Recessed guide insures centering of glass under spout. Easy to clean.

BEVERAGES: Available in the following flavors: Ginger Ale, Spur Cola, Hi-Spot Lemon, Root Beer, Orange (still or carbonated), Lemon-Lime, Grape, Cream Soda, Cherry.

DOMESTIC DISTRIBUTION: Through 29 Canada Dry company-owned plants, and Canada Dry syrup jobbers in several hundred cities.

THE COLUMBUS SHOW CASE COMPANY, 850 West Fifth Ave., Columbus 8, Ohio.

Merchandise Display Equipment.

CASES: Many models of showcases, both floor and wall type.

McGRAW ELECTRIC CO., TOASTMASTER PRODUCTS DIV., Elgin, Ill.

Toasters, waffle bakers, warmers.

WAFFLE BAKER: Model 2E2, double unit. "Siltect"-treated grids prevent waffle-sticking, eliminate oil conditioning of grids. Automatic; 20 ins. wide, 15½ ins. deep (incl. cord), 7½ ins. high closed, 10 ins. high open; installed wt. 26 lbs.; ship. wt. 41 lbs. Crated single.

POP-UP BUN TOASTER: Model 1D2-B, four-slice, automatic. For toasting hamburger buns, etc., on inner surface only. Toasts 250 half-buns, or 125 orders per hr.; 11½ ins. wide, 11 ins. deep, 8¾ ins. high; ship. wt. 25 lbs., single ctn. only. Also comes in 8-slice size.

POP-UP TOASTERS: Model 1D2, four slices, automatic. Toasts 250 slices per hr.; 11⅜ ins. wide, 11 ins. deep, 8¾ ins. high; ship. wt. 25 lbs., single carton only. Also comes in 2-, 6-, 8-, 12- and 16-slice sizes, up to 1,000 slices of toast per hr.

ROLL AND FOOD WARMER: Model 2DS, 2-drawer, designed for hot sandwiches or other foods for rush service during drive-in intermissions. Allows food service operator to prepare hot food in advance, keep it hot and oven-fresh for hours and serve quickly. Holds up to 20 doz. "hot dogs"; 23x23x22¾ ins.; drawer, 15½x16x4⅝ ins.; ship. wt. 190 lbs., crated single. Also comes in 3 and 4 drawer sizes.

DOMESTIC DISTRIBUTION: Through authorized "Toastmaster" distributors.

MASON, AU & MAGENHEIMER, P. O. Box 549, Mineola, N. Y.

Candy.

MASON PEAKS: Chocolate covered coconut; 1¾ oz.

MASON MINTS: Chocolate covered mint patty; 1⅝ oz.

PECAN COCONUT: Pecans and coconut with milk chocolate coating; 1⅝ oz.

BLACK CROWS: Licorice flavored gum drops; 1⅝ oz.

DOTS: Fruit flavored gum drops; 24 to box, 18 boxes to ship. case, also 120 ctns. to case.

DOMESTIC DISTRIBUTION: Direct.

SIMONIN OF PHILADELPHIA, Philadelphia 34, Pennsylvania.

Popcorn Oils.

POPSIT PLUS: Artificially butter flavored and colored peanut oil; packed in gallon tins; especially for lobby popping.

SEAZO: Coconut Oil; artificially butter flavored and colored. Packed in 50 lb. pails and 400 lb. drums; for central popping.

(SEE ALSO BELOW)

DOMESTIC DISTRIBUTION: Dealers and warehouse stocks in principal cities.

Cable Address: SIMONIN, PHILADELPHIA.

PRONTO POP CORN SALES CORP., 702 Beacon Street, Boston 15, Mass.

Popcorn Warmers.

COUNTER MODEL MLL: Rigidized stainless steel construction; underwriters' lab. approval; 20 lb. cap. Recirculating "Hot Blast" heating system. 26 ins. wide, 24 ins. deep, 38 ins. high.

PRONTO JUNIOR POPCORN DISPENSER: 10 lb. cap. Manual chute operation; "Hot Blast" heating system. 16x16x35 ins.

PRONTO "CONSOLE" WARMER: Available in walnut, mahogany or bleached oak; lined with stainless steel; insulated; cold cathode lighting. Cap. 30 lbs. popcorn; 3 ft. wide, 2 ft. deep, 54 ins. high.

STAR MFG. CO., 6300 St. Louis Avenue, St. Louis, Mo.

Popcorn Machines, Steamers.

POPCORN MACHINE MODEL 44: Brightly lighted plastic with exclusive "automatic indicator." Cap. 16 oz. per batch.

POPCORN MACHINE "JUMBO GIANT": Wholesale type popping unit; cap. 2½ lbs. per batch; gas or electric. Especially applicable to drive-ins.

HOT DOG STEAMER MODEL 32-S: Holds 125-200 "hot dogs" and 36-48 buns.

DOMESTIC DISTRIBUTION: All theatre supply dealers.

Cable Address: STARCO.

COLE PRODUCTS CORP., 39 S. LaSalle St., Chicago, Ill.

Beverage Dispensers.

"COLESPA" THREE-FLAVOR CUP DISPENSER: 600 cup cap., 1,400 drink syrup cap.; width 26 ins. ht. 67 ins. depth 24 ins. Maroon and grey finish.

"COLESPA" SIX-FLAVOR THEATRE MODEL: Illuminated advertising space of 4 ft. width for theater announcements; 1,200 cup cap. Maroon and gold finish.

BRANCHES: 420 Boylston St. Boston; 136 South 17th St., Philadelphia; 701-702 Book Bldg., Detroit; 649 South Olive St., Los Angeles; 475 Fifth Ave., New

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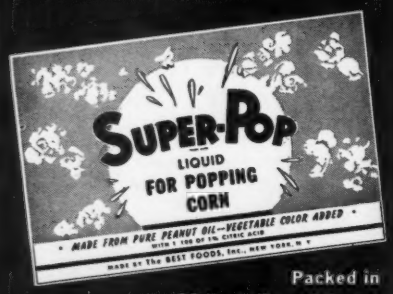
WHAT MAKES
popsit plus
America's Largest
Selling Popcorn Oil
IN WINTER WEATHER—IT POURS!
No Fuss—No Mess
POPSIT PLUS is always liquid at indoor temperatures . . . no pre-heating, no scooping, no splattering . . . just pour into the measuring cup and pop the sellin'est corn you've ever tasted!
popsit plus
LIQUID POPCORN POPPING OIL
Simonin of Philadelphia
POPPING OIL SPECIALISTS TO THE NATION

DEPENDABLE PERFORMANCE IN POPPING OILS

Packed in
50-lb. pails and drums



Packed in
38-lb. pails and drums

MADE BY ONE OF AMERICA'S LARGEST REFINERS

THERE IS ONLY ONE BEST FOODS GRADE OF QUALITY
BF

The BEST FOODS, Inc.
1 East 43rd Street
New York 17, New York

York; 420 Luckie St., Atlanta; 2259 Gilbert Ave., Cincinnati; 3808 Broadway, Kansas City, Mo.; 105 LaCruz Ave., Millbrae, San Francisco.

AUTO-VEND, INC., 5210 Bonita, Dallas 6, Tex.
Popcorn Machines.
'POP' CORN SEZ AUTOMATIC POPCORN VENDOR: Fully automatic, Universal motor, National slug rejector, plexi-glass dome, stainless steel; 10c or 5c coin operation. Ship. wt. 90 lbs. crated.

BRADLEY-EDLUND CORP., Syracuse, N. Y.
Beverage Dispensers.
BRADLEY JUNIOR MODEL "D": Floor space 24x22 ins., 1,000 cup capacity; serves 2 flavors. Coin changer optional.

SPACARB, INC., 311 East 23rd Street, New York 10, N. Y.
Automatic Soft Drink Vendor
MIXADRINK MODEL 4051: 1,000 cup capacity, 4 flavors.
Model 4051-H: Vends hot and cold drinks such as soup and chocolate. Wt. 600 lbs.; 66 ins. high, 30 ins. wide, 25 ins. deep.
BRANCHES: All principal cities of U. S.
DOMESTIC DISTRIBUTION: Purchases through New York office.

STEWART PRODUCTS CORP., Greenwich, Conn.
Beverage dispensers.
MODEL 5-580C: Cup machine; stainless steel measuring and dispensing valve, syrup tank, carbonator; 500 cup cap.; 59 in. high, 21 in. wide, 18 in. deep; available with coin changer.
DISTRIBUTION: Direct.

SUPURDISPLAY, INC., 233 East Erie St., Milwaukee, Wis.
Merchandise display equipment.
ILLUMINATED COUNTERS: Glass shelves; mirrored interior ends; animation; circulating hot air system; large or small.
DELUXE SALES COMBINATION: 8-foot candy and popcorn showcase; two sizes, 36 in. wide, 48 in. high, 24 in. deep, and 60 in. wide, 48 in. high, 24 in. deep.
CUSTOM-BUILT DISPLAYS: Equipment to fit any theatre.
DISTRIBUTION: Direct.

THE BEST FOODS, INC., 1 East 43rd St., New York 17, N. Y. Popcorn oils.
NUCOLINE: Refined coconut oil; color added; packed in 50 lb. pails and drums.
SUPER POP: Made from pure peanut oil; color added; packed in 38 lb. pails and drums.
(SEE ALSO LEFT HAND COLUMN)
DISTRIBUTION: Direct and jobbers.

BADGER POPCORN CO., Waterloo, Wis.
HULLESS BABY-WHITE: Rated 30 to 1 volume pop; 100 lb. bags.
DISTRIBUTION: Direct.

SODA POP AND POPCORN IN THEATRES

SODA POP and popcorn are high in the list of popular theatre confections. The fizz of the soft drink and the tantalizing smell of hot corn permeate about one-third of the 8,275 non-circuit theatres in the country. To be exact, 3,798 of them sell soda pop, either in bottles or through vending machines, and 3,964 of them sell popcorn.

SOFT DRINKS

A wide variety of soft drink brands is being merchandised with the adopted policy changing from theatre to theatre and area to area. All comments indicate patron satisfaction and demand. Writes one exhibitor in Colorado: "Lime is a big summertime drink and, with coke and root beer, my patrons enjoy the movies very much."

Another writes from Georgia that he buys syrup for fruit punch for about $2.35 a gallon and sells it at 10 cents a glass, while a third, from Oregon, says: "We find that non-carbonated fruit juices sell very well and are in many cases favored by parents for children's day-time shows."

The vast majority, or 89.7 per cent, of the independent theatres, representing 7,240 houses with some 3,635,000 seats, out of a total of 8,275, sell a bite or a sip in their lobbies.

In 1,371 theatres soft drinks in bottles are sold either through vending machines or over the counter. The rest, 2,080 houses, prefer the cup method of dispensing.

One exhibitor, who sells via the bottle method, sees no objection to the practice but, on the contrary, finds it more convenient and sees in it a distinct service to the patron.

"Our coin cooler is placed inside the theatre and no attempt is made to prevent the customers from taking the bottles with them to their seats," he writes. Significantly, he sells one drink to every four admissions six months out of the year. His house is located in a city of more than 100,000 population.

A THEATRE SALES survey has shown that the soft drink manufacturers have a very weak case for demands for higher prices on the retail sales of their merchandise, or for 7½ cent coins. More than 55 per cent of the theatres handling soft drinks already have abandoned the established pre-war nickel charge and today are selling refreshments for more than five cents. More than 45 per cent are charging ten cents or more.

Most of the independent showmen stick to the merchandising of one brand only. The statistics show that 1,747 sell that way while 342 theatres are offering their patrons a choice of three drinks or more. In this latter category, some say they are merchandising as many as eight different drinks, averaging out to five different brands in the 342 houses concerned. Two-thirds of the machine operations are confined to single-drink dispensers.

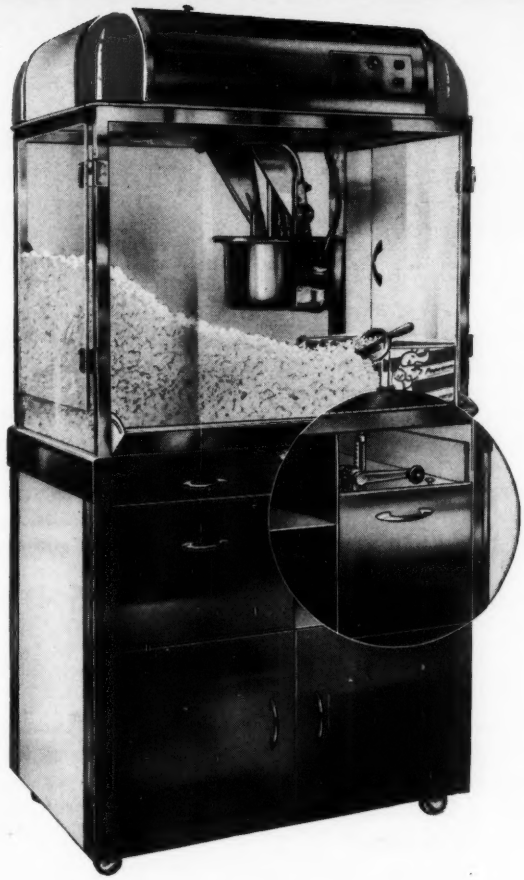
Soft drink merchandising in 62 per cent of the houses is done over the counter only. Of the rest, 35 per cent confine operations to machine selling.

POPCORN

About 3,964 of the non-circuit type theatres in 1949 were selling popcorn, a popular and long-established item which always has blazed the way for all other theatre sales. Of these, 3,964, a surprisingly large number, 1,109, confine their refreshment merchandising to popcorn only, having nothing to do with the sale of candy or soft drinks.

UMI

ONLY *Manley* BUILDS THE ARISTOCRAT OF POPCORN MACHINES



It's the Aristocrat because it's the leader! Watch its big-popping kettle — you can't match it anywhere for profit production. See its automatic seasoning system which eliminates guess work. It meters seasoning to the kettle — exactly the right amount for best taste — no waste, maximum profits.

MANLEY HAS THE LOOKS

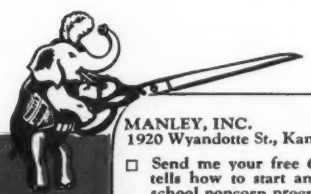
Look at its sleek, modern beauty, its cream-colored panels and red trim, so easily cleaned with a swipe of the cloth — no other machine approaches it for flashy good looks. This eye-appeal means buy-appeal. It's an unbeatable combination — beauty, ease of operation, great profit potential.

MANLEY HELPS YOU

Because Manley surveys the market, finds out what theaters need and then builds a machine that tops them all, fills *every* requirement for theater operation. No wonder it's called the Aristocrat of popcorn machines.

ONLY *Manley* GIVES YOU THE COMPLETE POPCORN PROFIT PACKAGE

You're wise three ways to buy Manley's complete popcorn line. First —more money from the profit-popping kettles in Manley Machines. Second—more volume from Manley supplies: pedigreed corn, super-refined seasoning, quick-dissolving salt, special bags and boxes. Third —more customers from Manley's national advertising in the Saturday Evening Post, Life, Good Housekeeping, Better Homes & Gardens, Collier's, and Ladies' Home Journal. You'll need all three—get all three from Manley.



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Buffalo, N.Y.	Denver, Colo.	Los Angeles, Calif.	Oklahoma City, Okla.	Seattle, Wash.
Charlotte, N.C.	Detroit, Mich.	Memphis, Tenn.	Omaha, Nebr.	Toronto, Ontario
Chicago, Ill.	Des Moines, Ia.	Minneapolis, Minn.	Philadelphia, Pa.	Vancouver, B.C.
				Washington, D.C.

MANLEY, INC. MPH 3-25-50
1920 Wyandotte St., Kansas City 8, Mo.

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☐ Have your representative call.

Your Name.....

Business Name.....

Address.....

City.....Zone.....State.....

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RESPONSIBILITY OF MANAGER FOR CONFECTIONERY SALES

Confectionery counter of the Mountain View theatre. Jack Thornton is manager.

Vending facilities of the Los Gatos theatre. The manager is Dave Davison.

[*Following is an account of the vending machine methods employed by Sunny Mount Theatre, Inc., Mountain View, Calif., at its Los Gatos and Mountain View theatres, prepared by B. A. Vecchiarelli, district manager.*]

CONFECTION SALES at our theatres are in direct charge of the managers, who promote them and receive 5% of the gross weekly income. One manager stimulated his popcorn sales by giving free a photo of Roy Rogers with every bag of popcorn. Another manager pushed up his popcorn sales by issuing coupons with every sale, and on Saturday afternoons he raffled various toys.

The confectionery sales staff is directly responsible to the managers, who have au-

CONFECTION DELIVERY REPORT

SUNNY-MOUNT THEATRES, INC.

FOR WEEK ENDING 2 / 5 1950

		CASES	BOXES	5c	10c	15c	25c	50c	.20	TOTAL
1	Sugar Daddy	1	100	100						
2	Welch Mix	1	100				100			
3	Mounds	1	100		100					
4	Johnson Bars	1	100			100				
5	Hershey Kisses	1	100					100		
6	Cigarettes	1	100						100	
7										
8										
9										
10										
11										
12										
13										
14										
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19										
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21										
22										
23										
24										
25										
26										
27										
28										
29	POPCORN BAGS	1	100							100
				5c	10c	15c	25c	50c	.20	
	TOTAL			100	100	100	100	100	100	100
							GROSS SALES			

_____THEATRE

_____CITY OR TOWN

(SIGNED) _____MANAGER

OK _____

TOTAL MATINEE & EVENING

OTHER DEPOSITS	
CANDY SALES	$100.00
POP CORN SALES	
RENTS	
SCREEN RENTALS	
TOTAL	$100.00

I hereby certify that I have delivered to the Manager the Sum of (cash) $_____

I hereby certify that the aggregate amount as herein contained is intact, on as of close of business

Above at left is a specimen of the candy and popcorn stock delivery report, which each manager signs. At right is a sample of the weekly sales report, with inventory incorporated therein. And at left is a section of the theatre receipts record to which the confectionery sales are transferred.

Sunny Mount Circuit Confectionery Sales Report and Inventory System

SUNNY-MOUNT THEATRES, INC.

POPCORN AND CANDY INVENTORY AND SALES REPORT

THEATRE _____ WEEK ENDING 2/5/50

DATE	OPENING INVENTORY RECEIVED DAILY	POP CORN Bag	ICE CREAM	CIGARETTES	COKE	DO	[illegible]	[illegible]	Hot Dogs
3/4	Closing Inventory	300	200	500	300	100	100	200	100
3/6	Received Whse.	100	100	100	100	100	100	100	100
3/9	" "	100	100	100	100	100	100	100	100
	Total Available For Sale	500	400	700	500	300	300	400	300
	Closing Inventory	100	100	100	100	100	100	100	100
	Quantity To Account For	400	300	600	400	200	200	300	200
	Selling Price Per Unit	.10	.10	.20	.10	.05	.10	.25	.20
	Amount To Account For	$40	$30	$120	$40	$10	$20	$75	$40
2/28	Sun. Sales	100.00							
29	Mon.	14.00					Hot Dogs		40.00
30	Tues.	40.00					POP CORN		40.00
3/1	Wed.	30.00					ICE CREAM		30.00
2	Thur.	20.00					CIGARETTES		120.00
3	Fri.	50.00					COKE		40.00
4	Sat.	120.00					CANDY		105.00
	Midnite						TOTAL		375.00
	TOTAL RECEIPTS	374.00							
	Amount To Account For	375.00							
	Difference Short	1.00							

REMARKS ON OTHER SIDE OF SHEET

UMI

thority to hire and fire. The district manager passes on them, however, particularly with reference to their neatness in appearance and their industry, after inspecting their work.

Supplies are purchased by the district manager directly from the candy and other manufacturers. We have a warehouse in which we store an average of $6,000 worth of merchandise a month. We have a rapid turnover, which prevents spoilage. We carefully avoid stocking any slow items, of course.

The confectionery counter is closed each night at 11 o'clock, and all of the equipment is immediately cleaned for the next day's operation. The stocks are also replenished at this time so as to be ready for operation despite any operation that might arise the next day. This procedure is followed religiously.

LOCATION AND EQUIPMENT

All candy counters are located in the center of the lobby, or foyer, so as to attract the attention of patrons before they enter the auditorium.

Each theatre is equipped with a Manley popcorn machine, a water cooling Coca Cola dispenser, a Trueade orange dispenser, and ice cream freezing unit, a hot dog grill, cigarette case, and a 9-foot candy display counter. The counter is stocked with 32 varieties of candy bars selling at 5c, 10c and 25c.

REPORTS AND INVENTORY

Each night the cash is accounted for and turned over to the box-office cashier, who enters it on the theatre box-office report, as indicated in the accompanying report sheets. There is thus a minimum of bookkeeping. A weekly inventory is taken of the stock of candy on hand.

All candy is delivered twice a week from the warehouse. The managers sign for the merchandise on a merchandise delivery order, and also weekly closing sales and inventory record.

DRIVE-IN REFRESHMENT SERVICE SYSTEM

[*The methods employed at a drive-in of Wometco Theatres in Florida are described below by the manager of the circuit confection department.*]

THE REFRESHMENT vending business in a drive-in theatre is essentially an entirely different business from ordinary theatre vending. Our vending operation at the 1,000-car Boulevard Dirve-In theatre on Route 1 just north of Miami, is operated exclusively by the circuit's own vending department. The theatre is open year-round, so there would be few or no periods of extended closings to allow for maintenance and reconditioning.

Economy of operation governed construction. The concession building, situated at the rear of the theatre itself, is approximately 90 feet long by 50 feet wide and is entirely open in front. The counter is 90 feet in length, counting the return to the wall on each side.

The rest rooms are recessed on each side of the building, and the only entrance to them is from the front, and so designed that all patrons must pass the counter in order to use these facilities.

The counter itself is laid out in two sections with an exact duplication of equipment on both sides permitting half the counter to be closed on slow nights and thus providing for greater efficiency and economy of operation.

Because it is designed to allow complete frontal opening and brilliant lighting during the breaks, and because of the size and capacity of the counters, it was decided to eliminate the car-to-car vendors. By the use of trailers and a loud-speaker system, patrons are induced to come to the sales building, thus simplifying the methods of control over sales, and offering a greater selection, which resulted in increased sales.

The stand sells hamburgers, hot dogs, cold drinks (root beer and Coca-Cola), popcorn, French fried potatoes, milk, ice cream, candy, cigarettes and cigars. It has been decided to push the hot dogs, drinks, hamburgers and popcorn since they are the best profit items.

Soft drinks outsell any other item, and as far as our operation is concerned, it has been found impractical to carry bottled beverages because of handling,, storage problems and time consumed in serving.

We have a large storage and preparation room in back of the counter. In this room are auxiliary griddles, spare beverage coolers, ice cream boxes and coffee urns, as well as locked storage cabinets for cups, paper supplies, candy and cigarettes. The merchandise is prepared in this room and supplied to the front counter.

HANDLING THE PUBLIC

About three-quarters of an hour before each break the concession booth is a beehive of activity. Supplies are being built up for the rush in order to facilitate rapid handling of customers. The main problem is to courteously and rapidly serve the patrons. The faster they get away from the counter, the larger the gross will be.

Consequently, toward the front of the building and away from the counter, we have placed tables, chairs and condiment racks, and items such as mustard, relish, onions, sugar, salt, straws, etc., so that people once served will move away from the counters to make room for others.

For the vending booth we have a manager and his assistant, and approximately eight serving girls. On the weekend this staff is supplemented. The girls are trained in courteous, rapid handling of patrons.

BOOKKEEPING METHODS

A very important phase of such an operation is the accounting control. Our unit has a retail inventory system, checking out at the end of each night. Careful handling of the cash and the immediate removal of folding money from the various money boxes by the manager and his assistant, will keep shortages to a minimum.

A nightly inventory sheet is also used, which is really a double check. As for example, in the case of Coca-Cola, the cup becomes the unit of sale and we know that we should use a certain number of gallons for a certain number of cups sold.

The same is true of hamburgers and hot dogs, where the roll is the unit of sale, and we get a certain number of hamburgers or hot dogs to the pound.

A staff meeting is held with the sales staff before each nights operation, and at that time they are informed of their averages and shortages from the night before. This method has been a psychological deterrent to leakage.

REFRESHMENT BREAKS

The problem of scheduling refreshment breaks or exit breaks is of primary importance in this type of operation, and close cooperation with the theatre supervision is essential so that the stand will be completely set up to handle the break rush. A poor time schedule can cost the vending operation many hundreds of dollars per month. Intelligent handling of trailers and public address systems can mean a lot to business, while careful attention to attractive signs and good merchandising and displays are important sales factors.

For our situation we selected a glazed tile for our walls, building and counter front, since it was felt that it gave the operation—interior and exterior—a clean appearance. Also it is a material which may be kept clean with very little effort.—VAN MYERS, *confection department manager, Wometco Theatres, Miami, Fla.*

UMI

PROJECTION ROOM BULLETIN:

MEETING THE DANGER OF FILM FIRE

WHAT TO DO IN CASE OF FILM FIRE

BURNING nitrate film is dangerous. It can kill —it has *killed. The slower it burns, the more dangerous it is.*

Burning nitrate film produces gas compounds of nitrogen and oxygen. In air, such gas quickly becomes nitric oxide; breathed into the lungs, nitric oxide is compounded with the water of the body into nitric acid, which burns the lining of the lungs, causing injury likely to endure for years if it does not soon result in death.

When film is ignited in a theatre projection room, only one proper course of action remains for the projectionist: TO GET OUT—*INSTANTLY!*

WHAT TO DO TO PREVENT FILM FIRE

NITRATE film is always a potential source of disaster **when not handled properly both in equipment operation and in storage.**

The reels on which the film is to be wound should have the sides perfectly straight, with no sharp edges.

Exchange reels used for shipping the film should never be used on a projector; they are not properly aligned, due to rough handling of them during shipment.

In rewinding film one should make sure that it is started slowly and evenly, with no excessive loop dragging on the table or floor.

Careful inspection should be given the film while it is being rewound, so as to spot any defect which might cause a break. Weakened patches or sprocket holes that do not look right should be repaired before screening.

SPLICING, REWINDING, HANDLING FILM

Film splices should invariably be clean and free of oil, and the sprocket holes should match perfectly, with the sides lined up and the entire patch flat. Only sharp scraping blades, and fresh film cement of the best quality should be used in making splices. Whenever possible, use only a proven type of mechanical splicer, which is more accurate than hand splicing.

Never leave any film, either loose or on reels, laying on the bench or near the projector. Film not in immediate use should be stored in approved film cabinets having tight-fitting doors and individual reel compartments that are properly insulated.

When changing reels on the projector or carrying them to the rewind table, never let the film end drag on the floor. In threading the film in the projector use very good judgment in allowing the proper slack to reach the lower magazine without having excessive film coiled up on the floor.

Scrap film should be put into an approved film scrap can, and no other material, such as oily rags, paper, etc., should be thrown into this receptacle.

In every case, the lamphouse arc should not be burning when the film is being threaded in the projector, and the hand dowser on the lamphouse should be closed. When one projector has completed its run it should not be threaded immediately, but only after the head, heat shields, aperture plate, etc., have had a reasonable time to cool off. To help heat dissipation, all projector doors should be left open during this interval.

PROJECTOR ADJUSTMENTS AND TESTS

The tension on the lower magazine should always be such that the last few feet of film are taken up evenly and without any jerks. The magazine doors should always be closed with the film in the projector and they should have firm latches.

Defective or worn sprockets, strippers, guide rollers, film guides, tension shoes and film valve rollers should be immediately repaired or replaced.

Always make sure that the automatic fire shutter mechanism is operating properly at the starting and stopping of the projector. Where the projector head has an automatic trip arm at the first film loop from the upper magazine, it should never be tied back because it is not operating properly. In most cases in which this trip arm is giving trouble the reason is that too big a loop is made in the film. If the arm trips even after shortening the film loop, the only thing to do is to have it repaired immediately, or to have a new arm installed. In no case should this arm be tied to the head permanently.

Make sure that the exhaust fan in the projection room always is operating properly and is of sufficient capacity to carry off all the smoke and gases that accumulate in case of fire.

TEST PORT SHUTTERS REGULARLY

Drop all the shutters periodically, after a day's run, and make careful inspection as to just how well the ports are closed. Any shutters or tracks loose, warped or ill-fitting should be repaired immediately.

Check carefully the master trip lines to see that they are connected properly to the manual trip hook, the automatic switch (if one is installed) controlling the room exhaust fan, the hooks on the upper film magazines, and also the hooks on the individual shutters.

Make sure that an approved type of fusible link is inserted in this trip line and that all links are located at the proper points, such as in the chain hangers on the shutters, at the upper film magazines, and at the main trip hook.

When the shutters are in the up position, and the projectors are in operation, never place an oil can, pliers, screw driver, etc., inside the port opening, even for a short time; such things can be forgotten.

—FROM THE BETTER THEATRES SECTION OF MOTION PICTURE HERALD

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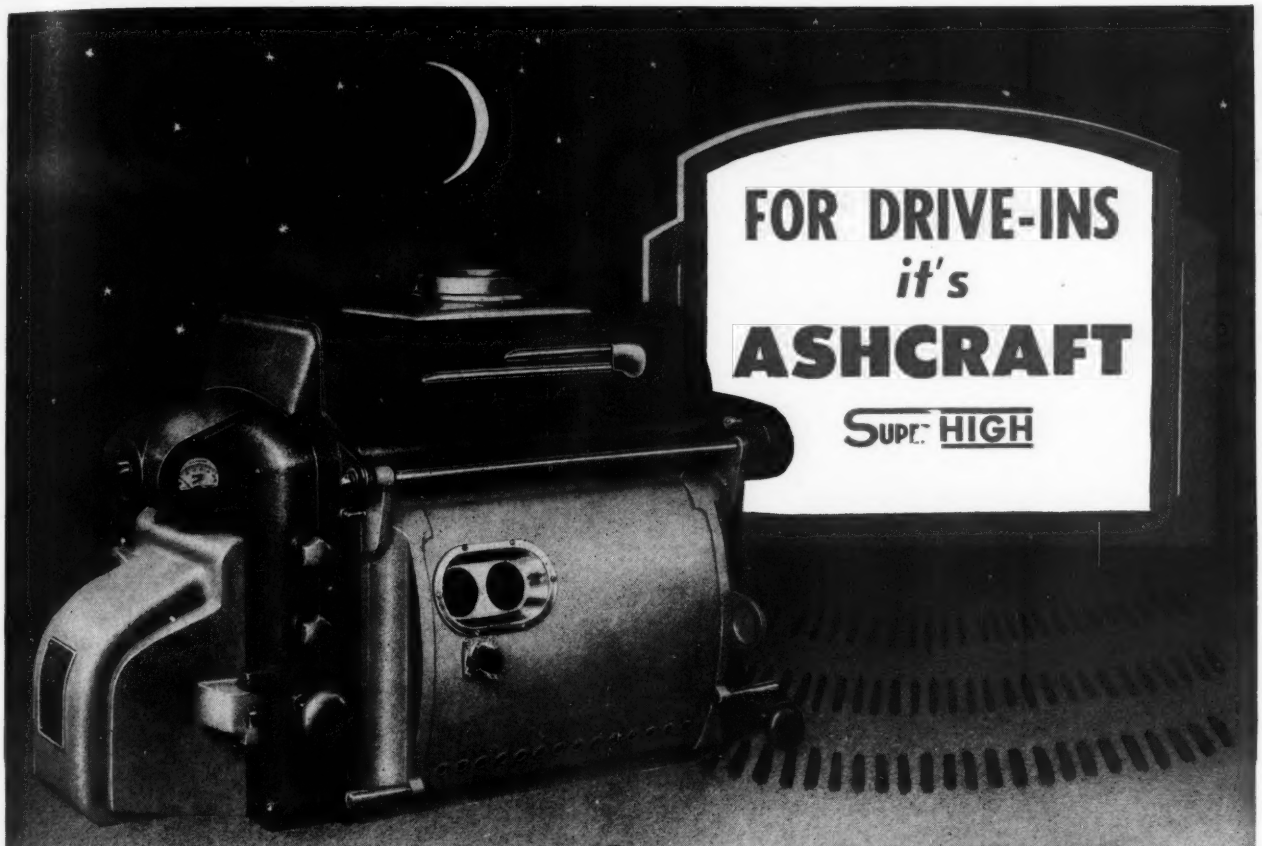

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